ACG2001 Principles of Accounting I
This course provides an introductory study of the fundamental principles of recording, summarizing and reporting the financial activities of proprietorships.

Credit Hours: 3

ACG2011 Principles of Accounting II
As the second course of the financial accounting series, this course concludes the study of financial accounting. Topics covered include plant assets, current liabilities, payroll, corporations, partnerships, and cash flow statements.

Credit Hours: 3

ACG2071 Managerial Accounting
As the last course of the series, this course concludes the study of manufacturing accounting and managerial accounting. Topics covered include financial statement analysis, job order costing, the process cost system, cost behavior, cost-volume-profit analysis, budgeting, profit analysis, responsibility accounting, differential analysis, capital investment analysis and decision-making under uncertainty.

Credit Hours: 3

ACG2100 Intermediate Accounting I
This course provides a systematic and in-depth study of the financial statements and underlying records. Special attention is given to the elements composing working capital, investments, and plants assets.

Credit Hours: 3

ACG2110 Intermediate Accounting II
As the second course of the series, this course continues an in-depth study of financial statements and underlying records. The elements that comprise the equity side of the balance sheet are emphasized with additional attention given to special problems in income determination and financial reporting.

Credit Hours: 3

ACG2450C Computerized Accounting Applications
This course is designed to teach the students how to accomplish common accounting functions with basic accounting software in order to set up, maintain, and establish defaults for chart of accounts, vendors, customers, inventory items, jobs, and employees.

Credit Hours: 3

AER1070C Dealer Policy & Procedures
Course designed to expose the student to back office operations, policy, procedures, and protocol.

Credit Hours: 2

AER1081C Introduction to Automotive Technology
A course designed to introduce the field of Automotive Service. Topics include auto service careers, shop safety, fuels, lubricants, fasteners, tools and equipment. An introduction to the major automobile systems and instruction in minor service procedures are provided.

Credit Hours: 4

AER1082C Intro to GM Automotive Technology
This course is designed to introduce the student to the various gm systems of the automobile. It will include instruction in shop practices, safety, service manuals, pay structures, tools, warranties, and personal relationships necessary to succeed in the GM dealership. The student will learn minor repair procedures including lubrication, wheel and tire, exhaust system service and new car pre-delivery service.

Credit Hours: 4

AER1197C GM Automotive Engine Repair
This course is a study of the principles of operation and problem diagnoses of the internal combustion engine. The theory of operation of the various engines is presented. Engines will be properly disassembled, parts identified, inspected, measured, and reassembled. Proper testing and break-in procedures along with approved diagnostic troubleshooting procedures will be emphasized.

Credit Hours: 4

AER1198C Automotive Engine Repair
A course designed to teach the principles and procedures necessary to completely rebuild an automotive engine and to provide the practical experience in the engine diagnosis, removal, disassembly, rebuilding, and dynamic check out. Topics include engine diagnosis; engine removal; engine disassembly; engine rebuilding; piston, pin and rod service; engine assembly; engine installation; valve adjustment; tune ups; and road test procedures. Special emphasis will be
given to safety procedures and the specific tools, fasteners, and equipment to be used.

AER1396C GM Manual Drive Train & Axles
A course designed to teach the principles and operations of manual transmissions and transaxles, clutches, overdrive units, pressure plates, propeller shafts, differentials, and drive axles and to provide practical experience in diagnosing, removing, maintaining, and repairing transmissions and drive systems. Topics include manual transmissions, overdrive systems, drive lines, differentials, and axles. Applications include front wheel drive, rear wheel drive, 4-wheel drive and all-wheel drive. Special emphasis will be given to safety procedures, and the specific tools and instruments to be used.

AER1496C GM Steering & Suspension Systems
The student will develop the knowledge and skills related to the operation and function of GM steering and suspension systems alignment, testing, diagnosis and repair of modern GM vehicle systems will be emphasized. GM Courses related to steering and suspension systems will be included in the curriculum. These are subject to change as new Courses replace outdated and obsolete Courses. Special emphasis will be given to safety procedures and the specific tools and instruments to be used.

AER1594C GM Brake Systems & Chassis Repair
This course is a study of the theory and operation of GM brake systems. Students will learn all aspects of the diagnosis, repair and testing of GM brake systems including drum and disc brakes and power brake operation and repair. GM Courses related to brake systems will be included in the curriculum. These are subject to change as new Courses replace outdated and obsolete Courses. Special emphasis will be given to safety procedures, and specific tools, and equipment to be used.

AER1690C GM Electrical Systems
A course designed to teach the principles and operations of the basic electrical systems found in automotive equipment and to provide practical experience in the service and repair of or adjustment to these systems. Topics include batteries, starters, alternators, regulators, ignition systems, chassis electrical circuits, and electrical accessory circuits. Special emphasis will be given to safety procedures and the specific tools and equipment to be used.

AER1694C GM Electronics
This course will continue the study of automotive electricity and electronics. Beginning with a review of semiconductor diodes and transistors and continuing through digital devices and microprocessors as applied to automotive systems. Emphasis will be placed on theory of operation, testing, and troubleshooting of microprocessor controls and systems.

AER1695C Electronics
A course designed to teach the fundamental principles of electronics and to introduce the application of electronics in the modern automobile.

AER1698C Electrical Systems
A course designed to teach the principles and operations of the basic electrical systems found in automotive equipment and to provide practical experience in the service and repair of or adjustment to these systems. Topics include batteries, starters, alternators, regulators, ignition systems, chassis electrical circuits, and electrical accessory circuits. Special emphasis will be given to safety procedures and the specific tools and equipment to be used.

AER2070C Automotive Service Consultant
This course will study the principles and procedures involved in operation of an automotive service facility as a service consultant. Communication both in terms of customer relations and internal relations with service facility is discussed. In addition, computerized databases, written communication with respect to estimates, repair orders, and invoices is covered as well as communication with customers by telephone. Service/Maintenance intervals, warranty, service
contracts, service bulletins, and campaign recalls relative to the vehicle identified is explained. Sales skills relative to service needs and shop operations relative to efficient workflow and industry procedures are presented. This course is intended for individuals that have either completed an Automotive Program at an accredited college or are working as a technician in a dealership. Approval by the Associate Dean of Automotive Technology is required.

AER2291C GM Automatic Transmissions & Transaxles  
Credit Hours: 4
A course designed to teach the principles and operations of automatic transmissions and transaxles, and to provide practical experience in diagnosing, removing, maintaining, and repairing automatic transmissions and transaxles. Applications include front wheel drive, rear wheel drive, 4-wheel drive and all-wheel drive. Special emphasis will be given to safety procedures, and the specific tools and instruments to be used.

AER2298C Automatic Transmissions & Transaxles  
Credit Hours: 4
A course designed to teach the principles, operations, diagnosis and repair of automatic transmissions and transaxles. Special emphasis will be given to safety procedures and the specific tools and instruments used.

AER2398C Manual Drive Train & Axles  
Credit Hours: 4
A course designed to teach the principles, operations, diagnosis and repair of manual transmissions and transaxles, drive shafts, axles, clutches and four-wheel drive systems. Special emphasis will be given to safety and the specific tools and instruments to be used.

AER2498C Steering & Suspension Systems  
Credit Hours: 4
A course designed to teach the principles of steering systems, suspension systems, and wheel alignment and to provide practical experience in repairing automobile suspension and steering systems, aligning front ends and balancing tires. Topics include wheel balancing, suspension systems, suspension angle and lines, wheel alignment, standard steering gears, power steering systems and frames. Special emphasis will be given to safety procedures, and the specific tools and instruments to be used.

AER2598C Brake Systems & Chassis Repair  
Credit Hours: 4
A course to teach the principles and operations of brake systems including disc systems, split systems, hydraulic cylinders, valving systems, traction control systems, and to provide practical experience in the repair of these systems. Topics include basic brake theory, drum brake systems, split systems, disc brake systems, hydraulic cylinders, machining and measuring techniques, power boosters, and road tests procedures. Special emphasis will be given to safety procedures and specific tools and equipment to be used.

AER2758C Heating & Air Conditioning Theory  
Credit Hours: 4
A course designed to teach the principles and operations of automotive heating systems, air conditioning systems and accessories, to provide practical experience in testing, analyzing, installing and repairing heating systems, air conditioning systems, air conditioning tools and equipment, lines, fittings, and valves, operational checks and adjustment, minor repairs, and the special tools and instruments to be used.

AER2798C GM Heating & Air Conditioning Theory  
Credit Hours: 4
A course designed to teach the principles and operations of automotive heating systems, air conditioning systems and accessories, to provide practical experience in testing, analyzing, installing and repairing heating systems, air conditioning systems, air conditioning tools and equipment, lines, fittings, and valves, operational checks and adjustment, minor repairs, and the special tools and instruments to be used.

AER2895C Advanced Engine Performance  
Credit Hours: 4
A course designed to teach the latest in computer engine controls, electronic fuel injection systems, emission controls and electronic instrumentation systems. This course includes theory of operation and construction, troubleshooting and repair.

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AER2896C GM Engine Performance
This course is designed to teach entry level skills in intake and exhaust systems, fuel systems, carburetors, and emission control systems. In addition, students will include industry specific instruction for fuel injection diagnoses and on board diagnostics will be covered.

AER2898C Engine Performance
A course designed to teach the principles and procedures of engine tune up and repair, and emission control systems.

AER2899C GM Advanced Engine Performance
This course is designed to teach job entry skills in the diagnosis and repair of drivability problems. Topics covered include engine performance and electrical and computer system operations. Emphasis is placed on manufacturer's diagnostic charts and diagnostic equipment. Use of scanners on both carburetor and fuel injected vehicles will be addressed. In addition, GM-ASEP students will receive GM specific instruction based on GM-STG course number 16003.01 engine performance.

AER2949 Co Op Work Experience
On the job training at an automobile dealership. Each of the eight-week apprentice work experiences will cover one term and includes a work week from 32 to 40 hours in a supervised program at the dealership.

AER2951 GM Internship I
This course is a companion to electrical systems I, and air conditioning and heating. In order to meet the state of Florida, N.A.T.E.F. and general motors ASEP standards, interns must complete 100 hours on-the-job learning experience in electrical systems and 100 hours on-the-job learning experience in heating and a/c related repair. While working under the mentorship of an experienced technician, students must document the required hours and master the student performance standards.

AER2952 GM Internship II
This course is a companion to steering and suspension and brake systems. In order to meet the state of Florida, N.A.T.E.F., and general motors ASEP standards, interns must complete 100 hours on-the-job learning experience in steering and suspension repairs, and 100 hours on-the-job learning experience in brake systems related repair. While working under the mentorship of an experienced technician, students must document the required hours and master the student performance standards.

AER2953 GM Internship III
This course is a companion to automotive electrical and electronics and advanced engine performance. In order to meet the state of Florida, N.A.T.E.F., and general motors ASEP standards interns must complete 100 hours on-the-job learning experience in electrical repairs, number 14.0-14.47 and 100 hours on-the-job learning experience in advanced engine performance related repair, task number 16.00-16.43. While working under the mentorship of an experienced technician, students must document the required hours and master the students' performance standards.

AER2954 GM Internship IV
This course is a companion to engines transmissions in order to meet the state of Florida, N.A.T.E.F., and general motors ASEP standard interns must complete 100 hours on-the-job learning experience in engine repairs, number 09.0-09.61 and 100 hours on-the-job learning experience transmissions related repairs. While working under the mentorship of an experienced technician, students must document the required hours and master student performance standards.

AFR1101 First Year Air Force ROTC (A)
This is a survey course designed to introduce students to the U.S. Air Force Reserve Officer Training Corps. Featured
topics include: officerhood and professionalism, military customs and courtesies, Air Force officer opportunities and an introduction to communication skills. A leadership laboratory includes and provides cadets with leader/follower experiences. Instruction is at the University of Miami campus (PH: 305-284-2870).

AFR1111 First Year Air Force ROTC (B) Credit Hours: 1
Continuation of the AFR1101 survey course designed to introduce students to the U.S. Air Force Reserve Officer Training Corps. Featured topics include: Origins of the Air Force, The Air Force Installation and Sister Services. A leadership laboratory is included and provides cadets with leader/follower experiences. Instruction is at the University of Miami campus (PH: 305-284-2870).

AFR2130 Second Year Air Force ROTC (A) Credit Hours: 1
This course examines general historical aspects of air and space power. The course covers the time period from the first balloons and dirigibles to the space age. Examples are provided to demonstrate the historical events leading to the modern-day Air Force. An additional focus will be on Air Force core values. Past Air Force operations and the acts of historical Air Force leaders will be points of discussion. A leadership laboratory is included and provides cadets with leader/follower experiences. Instruction is at the University of Miami campus (PH: 305-284-2870).

AFR2131 Second Year Air Force ROTC (B) Credit Hours: 1
This course continues the historical review of air and space power provided in MIS 2362. The course covers the Vietnam era to the conflicts of today. Historical examples are provided to demonstrate the development of Air Force capabilities and missions. This course provides the student with an understanding of the employment of air and space power. In addition, students will study how to become a more effective communicator. A leadership laboratory is included and provides cadets with leader/follower experiences. Instruction is at the University of Miami campus (PH: 305-284-2870).

ALS4162 Consequences of Biological Invasion Credit Hours: 3
Study of U.S. policies and programs affecting agricultural biosecurity, attention is devoted to current agricultural and extension and regulatory programs. Emphasis is on policies and procedures in detecting and reporting non-indigenous species. Students will develop the analytical capabilities to assess the consequences of agricultural biosecurity threats.

ALS4163 Challenges in Plant Resource Protection Credit Hours: 3
This course will provide students with applied training in the regulatory aspects of plant protection, using real-world case studies, scenarios and issues.

AMH2010 History of the United States to 1877 Credit Hours: 3
This course is a survey of American history from pre-Columbus to 1877 that provides a general history of the political, economic, cultural, and social development of American society. Special emphasis is placed upon the colonial period, the American Revolution, the rise of American Nationalism, the antebellum U.S., the U.S. Civil War, and the Reconstruction period. Students will also study the introductory concepts of history reading, writing, and methods. This is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

AMH2020 History of the United States Since 1877 Credit Hours: 3
This survey course of American history since 1877 provides students with a general history of the political, economic, cultural, and social development of American society. Special emphasis is placed upon U.S. expansion, progressivism, foreign relations, social movements, and political developments at the turn of the twentieth century and beyond. Students will also study the introductory concepts of history reading, writing, and methods. This is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

AMH2035 United States History: 1945 to the Present Credit Hours: 3
This survey course of the United States since 1945 provides students with a general history of the political, economic, cultural, social, military, and diplomatic development of American society. Special emphasis is placed upon the end of World War II, the politics of the Cold War at home and abroad, the social movements of the postwar era, the changing U.S. economy since 1945, and the post-Cold War domestic and international challenges faced by the nation.
Students will also study the introductory concepts of history reading, writing, and methods.

**AMH2091 Survey of African American History**  
**Credit Hours: 3**  
This a survey course of African American History including the early modern history of Africa, the emergence and evolution of the Atlantic Slave Trade, and the African American experience in the Western Hemisphere from the sixteenth century to the twenty-first century. Emphasis will be placed on the African American's economic, political, and cultural development and their contributions to American society. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**AML2010 American Literature: Colonial to 1900**  
**Credit Hours: 3**  
Students will be introduced to works which represent the diverse literature emerging from America up until 1900. Works may be selected from authors such as Anne Bradstreet, James Fenimore Cooper, Kate Chopin, Emily Dickinson, Frederick Douglass, Ralph Waldo Emerson, Nathaniel Hawthorne, Harriet Jacobs, Thomas Jefferson, Sarah Orne Jewett, Herman Melville, Edgar Allan Poe, Mary Rowlandson, Nat Turner, Mark Twain, and Walt Whitman. This is a writing course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**AML2020 American Literature: 1900 to Present**  
**Credit Hours: 3**  
Students will be introduced to works which represent the diverse literature emerging from America since 1900. Texts may be selected from major authors such as Hemingway, Faulkner, Frost, Hughes, Millay, Plath, Ellison, Baldwin, Oates, Angelou, and Roth. Upon successful completion of the course students will understand the significant concepts, contexts, movements, figures, and works of American literature in the 20th and 21st century. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**AML2600 African American Literature**  
**Credit Hours: 3**  
Students will be introduced to works that represent diverse African American literature since 1746. Texts may be selected from major authors such as Angelou, Douglass, Hughes, Hurston, King, and Truth. Upon successful completion of the course, students will understand the significant concepts, contexts, movements, figures, and works of African American literature since 1746. This course is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**AML2631 US Hispanic/Latino Literature**  
**Credit Hours: 3**  
A broad survey of US Hispanic/Latino Literature covering works from the New World Encounter to present era. Students will analyze texts that may be selected from authors such as Alvar Nunez Cabeza De Vacam, Hernando De Soto, Jose Marti, William Carlos Williams, Santiago Baca, Tato Laviera, Sandra Cisneros, Rudolfo Anaya, Gloria Anzaldua, Reinaldo Arenas, Junot Diaz, Jennine Capo Crucet, among others. This course is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**AMT0010C Aircraft Drawings**  
**Clock Hours: 21.00**  
This course covers aircraft drawings, care and use of blueprints, isometrics, orthographic and auxiliary projection lines and section, dimensions, limits, tolerances and allowances, geometric, construction, practical layout work and identification of standard parts and material, use of instruments, drawing and interpretation of free hand sketches of repairs and alterations, and use of various types of charts and graphs.

**AMT0020C Weight & Balance**  
**Clock Hours: 32.50**  
Familiarizes the student with the importance of weight and balance control, the procedures for weighing an aircraft, the computations necessary to arrive at current and balance data, and the disposition of weight and balance forms and records. The use of loading graphs and charts relating to the aircraft's center of gravity envelope is taught. Student fee charged.

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AMT0030C Fluid Lines & Fittings  
Clock Hours: 26.25
Prepares the student to fabricate and install rigid and flexible lines and fittings with regard to bends, tools, and lubricants. Provides training in the area of identification of materials, fittings and routing of fluid lines.

AMT0040C Materials & Processes  
Clock Hours: 84.00
Familiarizes students with the methods used to identify and select aircraft materials and with various heat treating processes. Provides experience in the use of non-destructive methods of inspection and evaluation. Provides instruction in correct shop practices and procedures and the use of special tools. Areas covered are torque values and torqueing methods, safety wiring, use of precision measuring equipment, shop safety, and technicians' ethics and legal responsibilities.

AMT0050C Ground Operations & Servicing  
Clock Hours: 31.50
Familiarizes the student with the proper methods of starting ground operating, servicing and securing aircraft.

AMT0060C Cleaning & Corrosion Control  
Clock Hours: 26.25
Provides experience in detecting, identifying, removal, and treatment of the various types of corrosion found on ferrous and non-ferrous metals. The course deals with the types of cleaners and methods of cleaning aircraft and aircraft components.

AMT0070C Applied Mathematics  
Clock Hours: 21.00
Reviews principles of mathematical functions and studies their application to aircraft and Power Plant maintenance operations.

AMT0081C FAR’S, Forms & Privileges  
Clock Hours: 42.00
Familiarizes the student with FAA regulations, advisory circulars, and other government and industry publications, proper terminology and procedures for the execution of log books and major repair and alteration forms, and privileges and limitations as they apply to the certified mechanic.

AMT0090C Basic Physics  
Clock Hours: 26.25
Provides an understanding of energy and matter and how their relationships apply to aircraft maintenance.

AMT0091C Basic Electricity  
Clock Hours: 89.25
The study of laws and theory of electricity and its application to aircraft systems, components, and circuits, to include practical knowledge of the different types of complex circuitry found in modern aircraft.

AMT0110C Aircraft Wood Structures  
Clock Hours: 11.00
Aircraft wood structures are covered in this section and familiarizes the student with the different types of wood used in aircraft structures as well as methods of repair to wood structures.

AMT0115C Aircraft Coverings  
Clock Hours: 12.00
Student will gain knowledge and skills to inspect, test, and repair fabric-covering materials. The student will be able to select and apply all types of fabric covering, including the synthetics types, and use of proper materials to finish the material.

AMT0120C Aircraft Finishes  
Clock Hours: 30.00
Student will acquire the ability to properly use a paint spray gun to apply various types of finishes on a variety of surfaces. The student will be able to apply trim lines and aircraft identification number, touch up paint defects, and identify and select aircraft finishing materials.

AMT0130C Sheet Metal Structures  
Clock Hours: 157.00
Student is provided with knowledge and skills needed to inspect, maintain, and repair sheet metal structures and components. The course provides the student an introduction to fiberglass, composite and other type non-metallic structural materials and methods of construction using these materials.
AMT0140C Aircraft Welding  
Clock Hours: 40.00  
A theory and practice of welding methods used in aircraft construction and repair is thoroughly covered with emphasis on gas welding and advanced work in helix arc welding.

AMT0155C Assembly & Rigging  
Clock Hours: 65.00  
Student will explain and compare aircraft design features in subsonic, transonic, and supersonic aircraft. They will be able to assemble and rig various aircraft control systems, analyzing and correcting faulty flight characteristics.

AMT0160C Airframe Inspection  
Clock Hours: 20.00  
Students will acquire the knowledge and skills needed to perform a 100-hour inspection of an aircraft. The student will demonstrate knowledge of FARs by checking appropriate A.D.’s classifying repairs, and pinpointing specific service problems. The student will complete the required maintenance forms, records, and inspection reports required by Federal Air Regulations.

AMT0200C Landing Gear Systems  
Clock Hours: 85.00  
Student will receive training in the proper methods of inspection, servicing and repair of landing gear retraction systems, shock struts, brakes, wheels, tires and steering systems. Rigging of various types retractable landing gear systems will be covered in detail.

AMT0210C Hydraulic & Pneumatics Systems  
Clock Hours: 75.00  
The student will study the theory of operation, maintenance requirements, and adjustments of various hydraulic components and systems. The course will provide the student with the knowledge of pneumatics as used in aircraft operation. The course covers fluid flow, identifies the various actuating units, type of seals, pumps, and differences between hydraulics and pneumatics.

AMT0220C Cabin Atmosphere Control Systems  
Clock Hours: 50.00  
This unit covers the various systems used to condition air and cabin pressurization as well as practical experience in inspecting, checking, troubleshooting, and servicing the oxygen system.

AMT0230C Aircraft Instruments Systems  
Clock Hours: 25.00  
A basic familiarization of aircraft instruments and their function to include removal, installation, and the installed testing of such instruments.

AMT0240C Communications & Navigation Systems  
Clock Hours: 30.00  
This course introduces the student with basic auto pilot operation and familiarizes him/her with the installation requirements and use of the various communication and navigation systems.

AMT0250C Aircraft Fuel Systems  
Clock Hours: 40.00  
The student is provided with the knowledge and skills needed to maintain fuel systems and fuel system components. He/she will be able to inspect, check, maintain, and repair aircraft fuel system components, fuel dump systems, fuel management and transfer systems, and perform refueling operations.

AMT0260C Aircraft Electrical Systems  
Clock Hours: 100.00  
The types and characteristics of aircraft electrical circuits and components are compared and evaluated. Advanced electrical systems as used in corporate and airline aircraft are studied. The course includes troubleshooting and repairs of AC and DC electrical systems and equipment.

AMT0270C Position & Warning Systems  
Clock Hours: 30.00  
This course presents the student with the inspection, servicing and maintaining of position and warning systems. Included in this area are navigation lights, beacons, and lights indicating the position of various aircraft components.

AMT0285C Ice, Rain, & Fire Protection  
Clock Hours: 30.00
Introduces the student to the basics of ice and rain control as it relates to aircraft surfaces, propellers, windshields, and other components. Methods of ice prevention and ice elimination are taught, providing the student with the knowledge and skills needed in the operation, inspection, checking, troubleshooting, and repair of airframe fire detecting and extinguishing systems.

AMT0300C Reciprocating Engines  
Clock Hours: 152.25  
The course covers theory and fundamental requirements for aircraft engines, basic parts of internal combustion engines, 2 stroke and 4 stroke cycle, power measurements and calculations, conversion of heat energy into mechanical energy, horsepower, piston displacement, compression ratio, types of horsepower, crankcase assembly, reduction gearing, crankshafts, and rod assemblies, cylinder and piston assemblies, and bearings used in reciprocating engines.

AMT0312C Turbine Engines & Turbine Engines Troubleshooting  
Clock Hours: 147.00  
A thorough study of the theory of operation of turbine engines and the function of the related engine components such as compressors, fuel controls, fuel pumps, governors, turbines, etc. Course encounters disassembly, inspection, minimal repairs reassembly test run, and final adjustment.

AMT0320C Engine Inspection  
Clock Hours: 32.50  
A course of study which details the correct methods of engine removal and installation, inspection and run up testing, including the final adjustments according to FAA regulations and manufacturer's recommendations.

AMT0400C Engine Instrument Systems  
Clock Hours: 31.50  
Students will have a knowledge of operation, installation, marking and interpretation of Power Plant instruments powered by or actuated by non-electrical means. They will be able to install, adjust, and calibrate instruments in accordance with FAA and manufacture's recommendations. This course will provide experience in inspection, checking, servicing, troubleshooting, and repair of engine instrument systems that are electrical in nature.

AMT0410C Engine Fire Protection Systems  
Clock Hours: 15.75  
To provide the student with the knowledge and skills needed in the operation, inspection, checking, troubleshooting, and repair of engine fire detecting and extinguishing systems.

AMT0420C Engine Electrical Systems & APU'S  
Clock Hours: 69.25  
This course provides knowledge and skills necessary to perform electrical repairs, installations, adjustments, and service. The subject area includes alternators, generators, voltage regulation, and paralleling of generators. The student will be introduced to the operational principles of auxiliary power units.

AMT0435C Lubrication Systems  
Clock Hours: 42.00  
Provides a comprehensive knowledge of the purpose and function of lubricants and lubrication system for power plants. Gives experience in identifying and selecting lubricants, as well as, inspecting, checking, servicing and troubleshooting repair of the system and components.

AMT0440C Ignition Systems  
Clock Hours: 84.00  
Students will have knowledge of the operation, repair, inspection, and service of reciprocating and jet power plant ignition systems. They will be able to overhaul and troubleshoot the various components of each system.

AMT0450C Engine Fuel Systems  
Clock Hours: 21.00  
Student is provided with knowledge and skills needed to maintain fuel system components. Student will be able to inspect, maintain, check, and repair engine fuel system components.

AMT0451C Fuel Metering Systems  
Clock Hours: 63.00  
Provides the student with the necessary information and practice necessary to inspect, check, service, troubleshoot, and repair reciprocating and turbine fuel metering system. The theory and practical application of carburetion, fuel
injection systems, and water injection systems are also learned. Fuel pumps, filters, and strainers are discussed and practical experience is gained in these areas.

**AMT0460C Induction Systems**
Clock Hours: 26.25
Gives student the knowledge and experience needed to service and maintain induction systems, superchargers, and exhaust systems. Material covered includes controls, indicators, theory of operation and inspection criteria.

**AMT0475C Engine Cooling & Exhaust Systems**
Clock Hours: 26.25
This course provides the student with an understanding of the need for the various types of engine cooling systems. Gives experience in the inspection, checking, servicing, troubleshooting and repairing of engine cooling system. This course will also enable the student to comprehend the function of exhaust systems including turbo charging and thrust reversers. The student will gain experience in inspection, checking, troubleshooting, and repairing various types of exhaust systems.

**AMT0490C Propellers & Unducted Fans**
Clock Hours: 89.25
This unit of instruction is designed to cover aircraft engine and turbo prop installations. Areas dealt with are: propeller fundamentals and terminology, synchronizing and ice control systems, identification and selection of propeller lubricants, balancing of propellers, propeller control systems, propeller governing systems, and installation, troubleshooting and removal of propellers. The theory of unducted fans is presented.

**AMT1001C Basic Electricity**
Credit Hours: 2
This course is for Inter Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Basic electricity. The study laws and theory of electricity and its application to aircraft systems, components, and circuits, to include practical knowledge of the different types of complex circuitry found in modern aircraft.

**AMT1010C Aircraft Drawings**
Credit Hours: 1
This course is for Inter Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. This course covers aircraft drawings, care and use of blueprints, isometrics, orthographic and auxiliary projection lines and sections, dimensions, limits, tolerances and allowances, geometric, construction, practical layout work and identification of standard parts and materials, use of instruments, drawing and interpretation of free hand sketches of repairs and alterations, and use of various types of charts and graphs.

**AMT1020C Weight & Balance**
Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Familiarizes the student with the importance of weight and balance control, the procedures for weighting an aircraft, the computations necessary to arrive at current and balance data, and the disposition of weight and balance forms and records. The use of loading graphs and charts relating to the aircraft's center gravity envelope is taught.

**AMT1030C Fluid Lines & Fittings**
Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV
FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Prepares the student to fabricate and install rigid and flexible lines and fittings with regard to bends, tools, and lubricants. Provides training in the area of identification of materials, fittings and routing of fluid lines.

**AMT1040C Materials and Processes**  
**Credit Hours: 2**  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Familiarizes students with the methods of inspection and evaluation. Provides instruction in correct shop practices and procedures and the use of special tools. Areas covered are torque values and torquing methods, safety wiring, use of precision measuring equipment, shop safety, and technician’s ethics and legal responsibilities.

**AMT1050C Ground Operations & Servicing**  
**Credit Hours: 1**  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Familiarizes the student with the proper methods of starting ground operating servicing and securing aircraft.

**AMT1060C Cleaning & Corrosion Control**  
**Credit Hours: 1**  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Provides experience in detecting, identifying, removal, and treatment of the various types of corrosion found on ferrous and nonferrous metals. The course deals with the types of cleaners and methods of cleaning aircraft and aircraft components.

**AMT1070 Applied Mathematics**  
**Credit Hours: 1**  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Reviews principles of mathematical functions and studies their application to aircraft and Power Plant maintenance operations.

**AMT1081C FARS Forms & Privileges**  
**Credit Hours: 1**  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Familiarizes the student with FAA regulations, advisory circulars, and other government and industry publications, proper terminology and procedures for the execution of log books and major repair and alteration forms, and privileges and limitations as they apply to the certified mechanic.

**AMT1090 Basic Physics**  
**Credit Hours: 1**  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Airframe and Power Plant certification by evaluation of prior learning experience. Provides an
understanding of energy and matter and how their relationships apply to aircraft maintenance.

**AMT1110C Aircraft Wood Structures**  
Credit Hours: 1  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. Aircraft wood structures are covered in this section and familiarizes the student with the different types of wood used in aircraft structures as well as methods of repair to wood structures. Student fee charged.

**AMT1115C Aircraft Coverings**  
Credit Hours: 1  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. The student will be able to select and apply all types of fabric covering, including the synthetics types, and use of proper materials to finish the material

**AMT1120C Aircraft Finishes**  
Credit Hours: 1  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. Students will acquire the ability to properly use a paint spray gun to apply various types of finishes on a variety of surfaces. The student will be able to apply trim lines and aircraft identification number, touch up paint defects, and identify and select aircraft finishing materials.

**AMT1130C Sheet Metal Structures**  
Credit Hours: 4  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. The student is provided with knowledge and skills needed to inspect, test, and repair fabric covering materials. The course provides the student an introduction to fiberglass, composite and other type non-metallic structural material and methods of construction using these materials.

**AMT1140C Aircraft Welding**  
Credit Hours: 1  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or valid FAA Aircraft Airframe certification by evaluation of prior learning experience. A theory and practice of welding methods used in aircraft construction and repair is thoroughly covered with emphasis on gas welding and advanced work in helix arc welding. Laboratory fee is required.

**AMT1155 Assembly & Rigging**  
Credit Hours: 2  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. Students will explain and compare aircraft design features in subsonic, transonic, and supersonic aircraft. They will be able to assemble and rig various aircraft control systems, analyzing and correcting faulty flight characteristics.

**AMT1160C Airframe Inspection**  
Credit Hours: 1  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. The student will be able to assemble and rig various aircraft control systems, analyzing and correcting faulty flight characteristics.
Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. Students will acquire the knowledge and skills needed to perform a 100-hour inspection of an aircraft. The student will demonstrate knowledge of FARs by checking appropriate A.D.’s classifying repairs, and pinpointing specific service problems. The student will complete the required maintenance forms, records, and inspection reports required by Federal Air Regulations.

AMT1200 Landing Gear Systems  
Credit Hours: 2  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. Students will receive training in the proper methods of inspection, servicing and repair of retractable landing gear retraction systems, shock struts, brakes, wheels, tires and steering systems. Rigging of various types of retracting landing gear systems will be covered in detail.

AMT1210 Hydraulic & Pneumatics Systems  
Credit Hours: 2  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. The student will study the theory of operation, maintenance requirements, and adjustments of various hydraulic components and systems. The course will provide the student with the knowledge of pneumatics as used in aircraft operation. The course covers fluid flow, identifies the various actuating units, types of seals, pumps, and differences between hydraulics and pneumatics.

AMT1220 CabinAtmosphere Control Systems  
Credit Hours: 1  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. This unit covers the various systems used to condition air and cabin pressurization as well as practical experience in inspecting, checking, troubleshooting, and servicing the oxygen system. Student fee charged.

AMT1230 Aircraft Instruments Systems  
Credit Hours: 1  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. A basic familiarization of aircraft instruments and their function to include removal, installation, and the installed testing of such instruments.

AMT1231C Avionics Installation and Troubleshooting I  
Credit Hours: 3  
This course is designed as a study of the installation processes of modern avionics systems, such as VHF communications, VHF navigation, ADF, radar, autopilots and others. Students will receive hands-on experience in the installation of avionics systems, fabrication of electrical harnesses, and testing of systems after installation. Students will begin preparation for element 3 of the FCC general radiotelephone operator's license (GRPL) examination.

AMT1240C Communications & Navigation Systems  
Credit Hours: 1  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 and/or a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. This course introduces the student with basic auto pilot operation and familiarizes him with the installation requirements and use of the various communication and navigation systems.
AMT1250C Aircraft Fuel Systems  Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 (and/or) a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. The student is provided with the knowledge and skills needed to maintain fuel systems and fuel system components. He/she will be able to inspect, check, maintain, and repair aircraft fuel system components, fuel dump systems, fuel management and transfer systems, and perform refueling operations.

AMT1260C Aircraft Electrical Systems  Credit Hours: 3
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 (and/or) a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. The types and characteristics of aircraft electrical and components are compared and evaluated. Advanced electrical systems as used in corporate and airline aircraft are studied. The course includes troubleshooting and repairs of AC and DC electrical systems and equipment.

AMT1261C Avionics Line Maintenance Fundamentals  Credit Hours: 3
The purpose of this program is to prepare students for employment as radio mechanics and as avionics technicians. The course content includes, but is not limited to, troubleshooting, repair and installation of airborne radio communications, radio navigation, and radar equipment systems in accordance with regulatory and industry standards. Also included is instruction in basics of AM and FM transmitters and receivers and avionics equipment. Skills preparation for passing licensing/certification tests required by industry forms an integral part of the curriculum.

AMT1270C Position & Warning Systems  Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 (and/or) a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. This course presents the student with the inspection, servicing and maintaining of position and warning systems. Included in this area are navigation lights, beacons, and lights indicating the position of various aircraft components.

AMT1285C Ice, Rain, & Fire Protection  Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Airframe Courses Major Code 5272 (and/or) a valid FAA Aircraft Airframe certification by evaluation of prior learning experience. Introduces the student to the basics of ice and rain control as it relates to aircraft surfaces, propellers, windshields, and other components. Methods of ice prevention and ice elimination are taught, provides the student with the knowledge and skills needed in the operation, inspection, checking, troubleshooting, and repair of airframe fire detecting and extinguishing systems.

AMT1751C Mathematics, Basic Physics, Basic Electricity  Credit Hours: 3
This course is required as part of the FAA Part 147 curriculum. Reviews principles of mathematical functions and studies their application to aircraft and powerplant maintenance operations. Provides an understanding of energy and matter and how their relationships apply to aircraft maintenance. The study of laws and theory of electricity and its application to aircraft systems, components, and circuits, to include practical knowledge of the different types complex circuitry found in modern aircraft.

AMT1752C Aircraft Drawings, Ground Operations, Far, Forms & Privileges  Credit Hours: 3
This course is required as part of the FAA Part 147 curriculum. Drawings, Symbols, and Schematic Diagrams, F.A.A. and Manufacturer's Aircraft Maintenance Specifications, Data Sheets, Manuals, and Publications, and Related Federal Aviation Regulations, and studies their application to aircraft and powerplant maintenance operations. Provides an
understanding of Mechanic Privileges within the Limitations Prescribed by Federal Air Regulations Part 65 and how their relationships apply to aircraft maintenance.

**AMT1753C Materials & Processes, Fluid Lines & Fittings**  
Credit Hours: 3  
In this course, students will accomplish a wide variety of lab projects leading to a high degree of understanding of basic tasks required of an aircraft maintenance technician related to metallic and non-metallic structures. Extensive lab work will help students also learn about composite structures including fiberglass, Kevlar, various core materials, and Plexiglass; as well as, fabric coverings, and aircraft finishes. This course is required as part of the FAA 147 curriculum.

**AMT1754C Weight & Balance, Cleaning & Corrosion Control**  
Credit Hours: 3  
This course covers the theory, operation, and maintenance of aircraft fluid lines and fittings; in addition to troubleshooting, maintenance, and repairs these systems.

**AMT1761C Sheetmetal & Non-Metallic Structures, Aircraft Covering, Aircraft Finishes**  
Credit Hours: 6  
In this course, students will accomplish a wide variety of lab projects leading to a high degree of understanding of basic tasks required of an aircraft maintenance technician related to metallic structures. Extensive lab work will help students also learn about composite structures including fiberglass, Kevlar, various core materials, and Plexiglass; as well as, fabric coverings, and aircraft finishes. This course is required as part of the FAA 147 curriculum.

**AMT1762C Wood Structures, Welding, Assembly & Rigging, Landing Gear Systems**  
Credit Hours: 6  
In this class, well cover aircraft control surfaces, including system rigging, maintenance, inspection, and troubleshooting. Extensive lab work will help students also learn about welding and wood structures. This course is required as part of the FAA Part 147 curriculum.

**AMT1771C Reciprocating Engines, Engine Instrument**  
Credit Hours: 6  
This course covers an in-depth study of reciprocating engine theory of operation, Engine Instruments, inspection requirements and techniques, and troubleshooting of malfunctions. This course is required as part of the FAA Part 147 curriculum.

**AMT1772C Turbine Engines, Engine Electric & APUS**  
Credit Hours: 6  
This course covers an in-depth study of turbine engine theory of operation, inspection requirements and techniques, and troubleshooting of malfunctions, including turbine engine lubrication systems, fuel metering, ignition and starting, engine instrument, as well as an in-depth study of auxiliary power units. This course is required as part of the FAA Part 147 curriculum.

**AMT2231C Avionics Installation and Troubleshooting II**  
Credit Hours: 3  
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. The course covers theory and fundamental requirements aircraft engines; basic parts of internal combustion engines, 2 stroke and 4 stroke cycle, power measurements and calculations conversion of heat energy into mechanical energy, horsepower, piston displacement, compression ratio, types of horsepower, crankcase assembly reduction gearing, crankshafts and rod assemblies, cylinder and piston assemblies, and bearings used in reciprocating engines.

**AMT2261C Avionics Line Maintenance Operations**  
Credit Hours: 4  
The purpose of this program is to prepare students for employment as radio mechanics and as avionics technicians. The course content includes, but is not limited to, troubleshooting, repair and installation of airborne radio communications, radio navigation, and radar equipment systems in accordance with regulatory and industry standards. Also included is instruction in basics of AM and FM transmitters and receivers and avionics equipment. Skills preparation for passing licensing/certification tests required by industry forms an integral part of the curriculum. The course content also includes training in communication, leadership, human relations and employability skills; and safe, efficient work practices.
AMT2300C Reciprocating Engines  Credit Hours: 5
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 and/or a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. The course covers theory and fundamental requirements aircraft engines; basic parts of internal combustion engines, 2 stroke and 4 stroke cycle, power measurements and calculations conversion of heat energy into mechanical energy, horsepower, piston displacement, compression ratio, types of horsepower, crankcase assembly reduction gearing, crankshafts and rod assemblies, cylinder and piston assemblies, and bearings used in reciprocating engines.

AMT2312C Turbine Engines  Credit Hours: 4
A thorough study of the theory of operation of turbine engines and the function of the related engine components such as compressors, fuel controls, fuel pumps, governors, turbines, etc. Course encounters disassembly, inspection, minimal repairs reassembly test run, and final adjustment.

AMT2320C Engine Inspection  Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. A course study which details the correct methods of engine removal and installation, inspection and run up testing, including the final adjustments according to FAA regulations and manufacturer's recommendations.

AMT2400 Engine Instrument Systems  Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. Students will have a knowledge of operation, installation, making and interpretation of Power Plant instruments powered by or actuated by non-electrical means. They will be able to install, adjust, and calibrate these instruments in accordance with FAA and manufacturer's recommendations. This course will provide experience in inspection checking, servicing, troubleshooting, and repair of engine instrument systems that are electrical in nature.

AMT2410C Engine Fire Protection Systems  Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. To provide the student with the knowledge and skills needed in the operation, inspection, checking, troubleshooting, and repair of engine fire detecting and extinguishing systems.

AMT2420C Engine Electrical Systems & APU’S  Credit Hours: 2
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. This course provides knowledge and skills necessary to perform electrical repairs, installations, adjustments, and service. The subject area includes alternators, generators, voltage regulation, and paralleling of generators. The student will be introduced to the operational principles of auxiliary power units.
AMT2435C Lubrication Systems
Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. Provides a comprehensive knowledge of the purpose and function of lubricants and lubrication systems for Power Plants. Gives experience in identifying and selecting lubricants, as well as, inspecting, checking, servicing and troubleshooting repair of the system and components.

AMT2440C Ignition Systems
Credit Hours: 2
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. Students will have knowledge of the operation, repair, inspection, and service reciprocating and jet power plant ignition systems. They will be able to overhaul and troubleshoot the various components of each system.

AMT2450C Engine Fuel Systems
Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. Student is provided with knowledge and skills needed to maintain fuel system components. Student will be able to inspect, maintain check, and repair engine fuel system components.

AMT2451C Fuel Metering Systems
Credit Hours: 2
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. Provides the student with the necessary information and practice necessary to inspect, check, service, troubleshoot, and repair reciprocating and turbine fuel metering systems. The theory and practical application of carburetion, fuel injection systems, and water injection systems are also learned. Fuel pumps, filter’s strainers are discussed, and practical experience is gained in these areas.

AMT2460C Induction Systems
Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. Gives student the knowledge and experience needed to service and maintain induction systems, superchargers, and exhaust systems. Material covered includes controls, indicators, theory of operation and inspection criteria.

AMT2475C Engine Cooling & Exhaust Systems
Credit Hours: 1
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. This course provides the student with an understanding of the need for the various types of engine cooling systems. Gives experience in the inspection, checking, servicing, troubleshooting and repairing of engine cooling systems. This course will also enable the student to comprehend the function of exhaust systems including turbo charging and thrust reversers. The student will gain experience in inspection, checking, troubleshooting, and repairing various types of exhaust systems. Student fee charged.
AMT2490C Propellers & Unducted Fans Credit Hours: 2
This course is for Inter-Institutional Articulation purposes only for Major codes A005 A.A.S. Aviation Maintenance Management and/or Major code 2204 A.S. Aviation Maintenance Management. Articulation of Credits for PSAV FAA Aircraft Power Plant Courses Major Code 5273 (and/or) a valid FAA Aircraft Power Plant certification by evaluation of prior learning experience. This unit of instruction is designed to cover aircraft engine and turbo prop installations. Areas dealt with are: propeller fundamentals and terminology, synchronizing and ice control systems, identification and selection of propeller lubricants, balancing of propellers, propeller control systems, propeller governing systems, and installation, troubleshooting and removal of propellers. The theory of unducted fans is presented.

AMT2763C Airframe Inspection, Hydraulic & Pneumatic Sys., Cabin Atmosphere, Credit Hours: 6
Aircraft Instrument, Comm/Navigation Systems
This course covers the theory, operation, and maintenance of cabin atmosphere, aircraft hydraulic and pneumatic systems; in addition to troubleshooting, maintenance, and repairs of these systems. Explore the theory, operation, and maintenance of aircraft instrument systems and an in-depth study of the wide range of aircraft instrument systems found in today’s aircraft. This course is required as part of the FAA Part 147 curriculum.

This course provides an in-depth study of airframe electrical systems, including inspection and repair of components and related wiring, power distribution, and circuit troubleshooting. Aircraft fuel and position warning systems, including ice, rain and fire protection, are explained in detail. This course is required as part of the FAA Part 147 curriculum.

This course covers turbine engine lubrication systems, fuel metering, ignition and starting systems. This course is required as part of the FAA Part 147 curriculum.

This course covers turbine engine lubrication systems, fuel metering, ignition and starting systems. This course is required as part of the FAA Part 147 curriculum.

ANT2000 Introduction to Anthropology Credit Hours: 3
An introductory study of the biological evolution and cultural development of human customs, social organization, and institutions. The student is introduced to the major fields of study undertaken by anthropologists. This is a writing credit course with international/intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ANT2140 Introduction to Archaeology Credit Hours: 3
The study of past cultures and the ongoing record of human history. This course reviews the major techniques and theories used to interpret culture change through time. This is a writing credit course with international/intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ANT2211 Introduction to World Ethnology Peoples of the World Credit Hours: 3
A survey of cultures on differing levels of development, focusing upon subsistence, social organization, religion, art, and culture change. This is a writing credit course with international/intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ANT2381 Culture & Society of Spain Credit Hours: 3
Spanish culture and society includes a study of Spanish life and character as it manifests itself in history, regional personality, celebrations, music, legendary figures, art and architecture. Special emphasis will be given to the southern part of Spain, Andalusia, which conserves the diverse cultural heritage of Europe, Africa, and the Orient (Near East).
ANT2825 Anthropology Field School  Credit Hours: 3
This Laboratory course is designed to supplement various topics relative to physical and cultural Anthropology as well as Archaeology. Study is limited to field projects.

ANT2905 Independent Study Anthropology  Credit Hours: 3
A directed study course available to both majors and non-majors who wish to investigate a particular problem related to the field of Anthropology. The student will apply for the course to the Head of the Behavioral Sciences Department via an Instructor with whom the student wantsto work.

APA1111C Introduction to Accounting  Credit Hours: 3
This course provides instruction in standard bookkeeping procedures for small professional, service, and retail sole proprietorships. This course focuses on understanding the accounting equation, preparing basic financial statements, cash management, payroll, and inventory management. This course is primarily for the non-accounting major.

ARC1056C Digital Media  Credit Hours: 2
Course provides working knowledge of current computer aided design software related to architecture and building construction. Laboratory work concentrates on learning to use a B.I.M. (Building Information Modeling) computer application applicable to the design process. Students will learn to apply virtual building technology to design, production and information analysis of a project.

ARC1126C Architectural Drawing  Credit Hours: 4
An introduction to principles, methods and applications of architectural drawing. Basic drafting tools will be used to learn orthographic projection to draw multi-view drawings including architectural design floor plans, elevations and sections, single-view drawings including paraline axonometric drawings and perspective drawings including one- and two- point.

ARC1301C Architectural Design I  Credit Hours: 4
This course covers basic two and three-dimensional design fundamentals, architectonic principles and architectural design skills. Techniques of model making, are learned through explorations in defining and analyzing architectural space.

ARC1302C Architectural Design II  Credit Hours: 4
This course furthers the study of three-dimensional design fundamentals, architectural space and architectural principles through the application of more advanced model making techniques, orthographic drawing and one and two point perspectives. The architectural design process is studied through the analysis and resolution of basic building programs and basic natural and man-made environmental factors.

ARC1701 Survey of Architectural History  Credit Hours: 3
A general survey of social, political, and cultural factors which have generated architecture from prehistoric times through the Fifteenth Century. This is a writing credit and International/Intercultural course. Students must earn a grade of C to meet the requirements of the Gordon Rule for writing.

ARC2201 Theory of Architecture  Credit Hours: 3
This course provides an understanding of architectonic elements, principles and aesthetics in architecture. It analyzes their application in contemporary and historical architecture and relates their application to architecture design studio solutions. The course also covers the work and philosophies of contemporary architects. This is a writing credit and International/Intercultural course. Students must earn a grade of C to meet the requirements of the Gordon Rule for writing.

ARC2303C Architectural Design III  Credit Hours: 4
This course emphasizes the analysis and resolution of the natural and man-made environmental context as a generator of architectural design ideas. The analysis of architectural building programs and architectonic principles are applied
to further define the organization, form, circulation and function of architectural space in buildings.
ARCS2304 Architectural Design IV  Credit Hours: 4
This course covers the development of architectonic conceptual ideas from program requirements and contextual factors as generators of architectural design. Architectonic principles of enclosure, massing, articulation of form, proportions, geometry, scale and structures are applied in the development of imagery for building design. A portfolio is created from each student's best work for the purpose of transfer admission to a university program.

ARC2461 Materials & Methods of Construction  Credit Hours: 4
Introduction to materials and methods of construction covering the evaluation of construction materials, functional applications and code requirements in the use of wood, masonry, concrete, steel and other materials.

ARC2580 Structures  Credit Hours: 4
Basic study in the principles and evaluations of structures as applied to architecture. Major topics of study include statics, stress, and the characteristics of beam and column behavior. This course will enable the student to develop a structural sense in creating architectural solutions.

ARH2000 Art Appreciation  Credit Hours: 3
Art Appreciation is a course for non-art majors that introduces a chronological history of art including style, form, media, and meaning. This is a writing credit course with international/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ARH2050 World Art History  Credit Hours: 3
World Art History is a chronological survey and analysis of world art starting with prehistory and placing major works in a cultural, historical and stylistic context. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ARH2051 Art History: Renaissance to Modern  Credit Hours: 3
Art History: Renaissance to Modern is a chronological survey and analysis of European based art from Renaissance to Modern, placing major works in a cultural, historical, and stylistic context. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ARH2351 Spanish Art History  Credit Hours: 3
Spanish Art History includes the study of outstanding examples of architecture, painting and sculpture, emphasizing the early Roman and Moorish contributions as well as the great Spanish painters of the Renaissance and the 19th and 20th Centuries. Included in this course are cultural trips to museums, galleries and monuments in Seville.

ART1201C 2D Design  Credit Hours: 3
Two-dimensional study of form, principles of organization, and the elements of design fundamental for creative work in 2-D visual arts.

ART1203C 3D Design  Credit Hours: 3

ART1300C Drawing I  Credit Hours: 3
Still life, landscape, and other compositions utilizing a variety of media emphasizing elements and materials of representational drawing from observation.

ART1301C Intermediate Drawing  Credit Hours: 3
An extension of the content of Drawing I with increased concentration upon analytical description, pictorial composition, and drawing as a means of visual communication of ideas.
ART1431C Beginning Silkscreen Credit Hours: 3
Introduction to the basic techniques of Silkscreen Printmaking using water-based inks. Students will learn Stencil, Hand-Drawn, Rubylith and Photo Emulsion processes in the creation of multiple limited edition prints. Planning of individual design problems is stressed.

ART1600C Computer Art Credit Hours: 3
A basic course in how the computer can be adapted and used in the visual arts. Creative uses of the computer and assorted hardware and software will introduce the student to fine art and applied art applications. A knowledge of programming is not required.

ART2205C Color Theory Credit Hours: 3
A basic course in the exploration of color theories, color systems, and color relativity in regard to optical sensation, lighting variation and psychological impact.

ART2330C Life Drawing Credit Hours: 3
Study of human anatomy for artists, utilizing techniques of visual representations from direct observation of clothed and unclothed models.

ART2400C Beginning Printmaking Credit Hours: 3
A study of the processes and techniques in intaglio, polymer light-sensitive and relief printmaking.

ART2500C Painting I Credit Hours: 3
An introduction to creative techniques and composition applied various media.

ART2501C Painting II Credit Hours: 3
A creative exploration of oil, acrylic techniques and/or water media with an emphasis on composition.

ART2540C Watercolor Credit Hours: 3
A creative exploration of watercolor techniques and media with an emphasis on composition.

ART2623C 3D Computer Modeling for Animation Credit Hours: 3
This course is an introductory level course in 3D animation. Students create complex animations which are carefully planned through storyboarding techniques. Students will complete 3D animation projects and follow the 3D animation process, practicing and applying various features of the 3D animation software package.

ART2701C Sculpture Credit Hours: 3
A three-dimensional study of form and concept utilizing physical material to occupy real space either free standing or bas-relief. The principles of organization and the element of design fundamentals are carried over and expand from 3-D design.

ART2750C Ceramics I Credit Hours: 3
Study of basic ceramic shaping techniques, glazing, decorating and firing.

ART2751C Ceramics II Credit Hours: 3
A study of advanced techniques in ceramics synthesizing basic skills with more advanced concepts and techniques of forming clay, surface decoration, glazing and firing.

ART2752C Ceramics: Throwing on the Potter’s Wheel Credit Hours: 3
A fine arts study of advanced techniques in ceramics emphasizing concepts and techniques of forming clay on the wheel, surfacedecoration, glazing and firing.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART2754C</td>
<td>Ceramics: Hand-Building</td>
<td>3</td>
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<tr>
<td></td>
<td>Fine arts ceramics course to develop hand-building through various projects which emphasize technique, creativity, and problem-solving. Includes advanced concepts and techniques of forming clay, surface decoration, glazing and firing.</td>
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<tr>
<td>ART2777</td>
<td>Ceramics Skills &amp; Concepts</td>
<td>3</td>
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<tr>
<td></td>
<td>Introduction to conceptualization and expression of personal ideas using ceramics as an art form: functional design and aesthetics, formation and communication of personal ideas through design, clay as a material, technical hand building and wheel throwing forming methods, surface methods, and firing of work.</td>
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</tr>
<tr>
<td>ART2905</td>
<td>Independent Study</td>
<td>3</td>
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<tr>
<td></td>
<td>A course designed to establish a framework for future self-learning. Students will shape the course to fit their needs by planning activities with a faculty advisor.</td>
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<tr>
<td>ART2906</td>
<td>Independent Study: Ceramics</td>
<td>3</td>
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<tr>
<td></td>
<td>A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the ceramics process.</td>
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<tr>
<td>ART2907</td>
<td>Independent Study: Drawing</td>
<td>3</td>
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<tr>
<td></td>
<td>A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the drawing process.</td>
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<tr>
<td>ART2908</td>
<td>Independent Study: Sculpture</td>
<td>3</td>
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<tr>
<td></td>
<td>A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the sculpture process.</td>
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<tr>
<td>ART2909</td>
<td>Independent Study: Painting</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the painting process.</td>
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</tr>
<tr>
<td>ART2931C</td>
<td>Art Special Topics: (Specify Medium)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>A studio course centered on a specific medium of art and topics of current interest. Media, topics or focus may vary from semester to semester. Special Topics credit hours are not automatically transferable. Transfer credit is the prerogative of the receiving institution.</td>
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<tr>
<td>ART2932C</td>
<td>Special Topic: Ceramics</td>
<td>3</td>
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<tr>
<td></td>
<td>A ceramics studio course centered around topics of current interest or special interest to students. Topics or focus may vary from semester to semester.</td>
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<tr>
<td>ART2950</td>
<td>Seminar in Art</td>
<td>3</td>
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<tr>
<td></td>
<td>A course designed for students who wish to combine the study of Art with travel in a foreign country. Variable content depends on areas visited.</td>
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<tr>
<td>ART2954C</td>
<td>Portfolio Preparation &amp; Exhibition</td>
<td>3</td>
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<tr>
<td></td>
<td>This course prepares Visual Art and Design students to transfer to an upper-division institution. It is intended for those pursuing an Associate of Arts degree with a concentration in Visual Art or Design. Acting as a &quot;capstone&quot; to the students lower-division studies, this course helps students prepare a portfolio required for transfer. In addition, competencies in Courses are validated, presentation issues are enhanced and applied and a &quot;Statement of Intent&quot; is prepared to accompany the portfolio.</td>
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</tr>
</tbody>
</table>
ASC1010 History of Aviation  Credit Hours: 3
A survey of aviation from its beginning with early myths, through gliders, balloon flights and powered flight to the present jet age. Includes effects of wars on the development of civil and military aircraft and discusses significant personnel flights and aircraft in tracing the advancement of general, commercial, and military aircraft. The major emphasis of the course will be directed towards the development of aviation in the United States.

ASC1100 Navigational Science I  Credit Hours: 3
This course, together with ATT 1100, provides the aeronautical knowledge for the professional pilot and aviation administration programs. The areas of study include airport operations, airspace, flight information publications, and basic air navigation including pertinent Federal Aviation Administration Regulations (FAA), preflight planning, cross country navigation, and navigational equipment and its operation. Successful completion of ATT 1100 (48 hours) and ASC 1100 (48 hours) fulfills private pilot ground school requirements through Broward College’s Part 141 approved pilot ground school curriculum and prepares students for the FAA private Pilot (airplane) Computerized Knowledge Exam.

ASC1210 Aviation Weather  Credit Hours: 3
A study of the basic concepts of meteorology, temperature pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing, and fog analysis and use of weather data; interpretation of the National Weather Service maps, reports and forecasts.

ASC1550 Aerodynamics  Credit Hours: 3
An analysis of the physical laws and aerodynamic principles which govern flight, aircraft stability and control, weight and balance, and aircraft instruments affecting flight as well as operational considerations of controllable pitch propellers, retractable gear, weather, and precision maneuvers.

ASC1610 Aircraft Engines, Structures, & Systems  Credit Hours: 3
This course discusses aircraft engine types and theory of operation, materials and construction models of aircraft structures, operations of hydraulic, electrical, fuel, pressurization, anti-icing, and heating and instrument systems, including sources of power for their operation.

ASC2110 Navigation Science II  Credit Hours: 3
This course, together with ATT 2120, provides the aeronautical knowledge for the instrument rating. Areas of study include methods and procedures for the solution of advanced pilotage and dead reckoning problems, the functioning capabilities and limitations of aircraft navigational equipment. Successful completion of ATT2120 (48 hours) and ASC2110 (48 hours) fulfills instrument rating ground school requirements through Broward College’s Part 141 approved pilot ground school curriculum and prepares students for the FAA Instrument Rating (airplane) Computerized Knowledge Exam.

ASC2230 Aviation Law & Regulations  Credit Hours: 3
An introduction and analysis of the regulations and laws governing airport and airline operations, incorporating aviation safety. Topics of discussion include the major regulations to include: Federal Aviation Regulations (FARS) 77, 108, 121, 129, 135, 139, 150, 191, and NTSB 830. These topics will include navigable airspace, airport noise and the applicable Advisory Circulars (A/C) that explain compliance. Additionally, these topics of discussion will include an overview of how the regulations are governed and administered, compliance with overview of how the regulations are governed and administered, compliance with regulations, non-compliance, and management of government regulations.

ASC2472 Human Factors in Flight & Air Traffic Control  Credit Hours: 3
This course discusses the human factors issues involved with flight and those affecting air traffic controllers. Students will learn significant aero-medical factors common to the aviation environment and the decision-making process. Students will apply knowledge gained through the examination of NTSB accident reports outlining the causes and describing ways an accident could have been prevented.
ASC2870 Aviation Safety  Credit Hours: 3
The primary goal of this course is to provide aspiring aviation professionals with a comprehensive understanding and enhanced awareness of aviation safety. Class will participate in analyzing the probable cause of selected aviation accidents, review detailed analyses of accidents related to topics of human factors, runway incursions, weather, mid-air collisions and mechanical and maintenance issues. Federal agencies which regulate aviation with emphasis on those concerned with safety will also bestudied.

ASC2949 CO OP Work Experience  Credit Hours: 3
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer.

ASC3215 Advanced Aviation Weather  Credit Hours: 3
The concepts of weather, weather hazards, meteorological flight planning, aviation weather equipment, and consideration of weather conditions as they relate to aircraft and flight performance are included.

ASC3321 Advanced Aviation Law  Credit Hours: 3
An advanced class in the human factors which affect flight performance and safety. CRM skills are emphasized along with leadership, teamwork, followership, decision-making, and communication skills.

ASC3478 Advanced Human Factors I  Credit Hours: 3
An advanced class in the human factors which affect flight performance and safety. CRM skills are emphasized along with leadership, teamwork, followership, decision-making, and communication skills.

ASC4476 Advanced Human Factors II  Credit Hours: 3
A continuation of Advanced Human Factors I, covers crew briefing, task management, use of checklists, safety briefings, and passenger conflict management.

ASL1140 American Sign Language I  Credit Hours: 4
Students will acquire the fundamental linguistic principles of American Sign Language and vocabulary totaling approximately 500 concepts, both expressively and receptively. Cultural literacy will be enhanced related to deafness and Deaf culture through reading, writing, and the social environment of the Deaf Community. A variety of classroom literacy activities and exercises, supplemented by laboratory and/or multi-media presentations, will be utilized to develop communicative competence and an appreciation for cultural diversity.

ASL1150 American Sign Language II  Credit Hours: 4
Students will acquire intermediate linguistic principles of American Sign Language and vocabulary totaling approximately 500 new concepts, both expressively and receptively. Cultural literacy will be enhanced related to deafness and Deaf culture through reading, writing, and the social environment of the Deaf Community. A variety of classroom literacy activities and exercises, supplemented by laboratory and/or multi-media presentations, will be utilized to develop communicative competence and an appreciation for cultural diversity.

ASL2160 American Sign Language III  Credit Hours: 4
Students will acquire advanced linguistic principles of American Sign Language and vocabulary, both expressively and receptively. Classes are conducted in ASL at an advanced level and pace without voice-interpretation. Cultural literacy will be enhanced related to Deaf Studies and Deaf Culture through interactions within the Deaf community. Linguistic activities and exercises supplemented by laboratory and/or multi-media presentations will be utilized to develop communicative fluency and an appreciation for cultural diversity. (This course is designed for students who have excelled in ASL I and ASL II as content builds upon the foundation laid in those prerequisite Courses. Students should check individual university program requirements for transferability.)

AST1002 Horizons in Astronomy  Credit Hours: 3
AST1002 is an introductory course that outlines the origin, characteristics, and evolution of the solar system, stars, and galaxies and engages the historical milestones in astronomy from the ancient astronomers to the modern observatories. Students are expected to evaluate current and expected future trends in astronomical research and
theories using written compositions and analysis in algebra involving solutions of multi-variable equations and formulas. Math placement score equivalent to MAT1033 level of equation solving is sufficient.

**AST1003 Astronomy of the Solar System**
Credit Hours: 3
AST1003 is an astronomy course outlining the knowledge gained from space probes of the Sun, the Moon, Earth, and the planets and evaluating the Solar System formation theories. The students will use writing compositions, observations, and mathematical analysis to analyze the data obtained by observing these bodies.

**AST1004 Astronomy of Stars & Galaxies**
Credit Hours: 3
AST1004 is an astronomy course outlining the important astronomical entities (e.g., stars, gas, dust, galaxies, quasars) beyond the solar system and their evolution in terms of the quantum mechanical effects in the macro world. The students will use writing compositions, observations, and mathematical analysis to analyze these concepts.

**AST1022L Astronomy Laboratory**
Credit Hours: 1
AST1022L is a laboratory which allows students to able to collect and analyze data in a variety of experiments covering topics covered in its companion Courses: AST1002, AST1003, or AST1004. Students will create experiment reports and conduct telescopic observations.

**AST1037 Scientific Search for Life in the Universe**
Credit Hours: 3
This interdisciplinary course examines the nature and history of life on earth, possible life favoring environments within the solar system and in the detecting life in the universe at large. Topics of discussion include the evolution and biochemistry of terrestrial life, the formation of organic compounds in the solar system and other extraterrestrial environments, physical constraints, equipment, and strategies for detecting intelligent life in the universe.

**ATF1100 Private Flight Training**
Credit Hours: 3
This course provides the flight training and experience required by the Federal Aviation Regulations (FAA) Part 141 regulations for a Private Pilot Certificate. Minimum approved FAA Part 141 course hours are 35 flight hours, and 55 instructional hours to include four stage exams. In order to receive credit for the course, student must earn a private pilot certificate.

**Hourly costs:** Aircraft C172, or PA28, $145/hr. Instruction $59/hr. Fuel surcharge applies if cost is over $5.00/gal. Should the cost go up to $5.50/gal, a $.50/gal cost is added to aircraft charges, and anything below is at no extra charge to the student.

**No Show Fee:** Represents cost of aircraft and instructor time scheduled for the event.

*Note: This course not approved for Veterans seeking to use Veterans Educational Benefits.*

**Final Examination Fee:** $500. If using Designated Pilot Examiner (DPE) from $600 - $950. No cost is incurred if scheduled directly with FAA. Final exam expense is solely the responsibility of the student.

*Note: Pilot training is a proficiency based process. Times specified are the minimum to meet FAA approved course Part 141 training requirements. Individual training times may be more than minimums if additional time is required to demonstrate proficiency in prescribed lesson elements, or to repeat lessons which were incomplete, or unsatisfactory. Students should allow approximately 15% additional cost for each flight course.*

**ATF2204 Commercial Flight Instruction (Commercial Pilot Training ASEL)**
Credit Hours: 3
This course provides the aeronautical experience required to obtain a commercial pilot certificate, ASEL. This will qualify a student for the FAA Commercial Pilot Certificate examination under Federal Aviation Regulations. FAA Part 141 approved course minimums are 50.0 flight hours, 38 complex PA28R, 12 solo PA28, or C172, and 58 instructional hours to include three stage exams. In order to receive credit for the course, student must earn a commercial pilot certificate.

**Hourly costs:** Aircraft, PA28, or C172, $145/hr., $149/hr. complex - PA28R. Instruction $59/hr. Fuel surcharge applies if cost is over $5.00/gal. Should the cost go up to $5.50/gal, a $.50/gal cost is added to aircraft charges, and anything below is at no extra charge to the student.

**No Show Fee:** Represents cost of aircraft and instructor time scheduled for the event.

*Note: VA will not pay any penalty fee; such costs are solely the responsibility of the student. VA does not cover this cost.*

**Final Examination Fee General Information:** Costs vary per Designated Pilot Examiner (DPE) from $600- $950.
No cost is incurred if scheduled directly with FAA. Final exam expense is solely the responsibility of the student. VA does not cover this cost.

*Note: Pilot training is a proficiency based process. Times specified are the minimum to meet FAA approved course Part 141 training requirements. Individual training times may be more than minimums if additional time is required to demonstrate proficiency in prescribed lesson elements, or to repeat lessons which were incomplete, or unsatisfactory. Students should allow approximately 15% additional cost for each flight course. VA will not cover costs associated with hours above the course minimums.

ATF2205 Complex Flight Instruction (Commercial Training – Multi) * Credit Hours: 3
This is the final in the series of Courses designed to provide the aeronautical experience for an FAA Commercial Pilot Certificate with instrument rating under Federal Aviation Regulations. During this course the student achieves qualification in complex air-craft. The minimum flight and FTD hours, exclusive of the final check ride, represent 78.5 hours with a total of 41.5 instructional hours to include flight briefs and stage exams. Prerequisite: Instructor's approval.

Hourly costs: Aircraft, PA34 $250/hr. Instruction $59/hr. Fuel surcharge applies if cost is over $5.00/gal. Should the cost go up to $5.50/gal, a $.50/gal cost is added to aircraft charges, and anything below is at no extra charge to the student.

Final Examination Fee: This course is eligible for in-house examination at a cost of $500. Costs vary per Designated Pilot Examiner (DPE) from $600 - $950. No cost is incurred if scheduled directly with FAA. Final exam expense is solely the responsibility of the student. VA does not cover this cost.

*Note: Pilot training is a proficiency based process. Times specified are the minimum to meet FAA approved course Part 141 training requirements. Individual training times may be more than minimums if additional time is required to demonstrate proficiency in prescribed lesson elements, or to repeat lessons which were incomplete, or unsatisfactory. Students should allow approximately 15% additional cost for each flight course. VA will not cover costs associated with hours above the course minimums.

ATF2305 Instrument Flight Instruction (Instrument Training) * Credit Hours: 3
This course will prepare the student for an instrument rating. Student must have earned a private pilot license prior to beginning instrument training. The course provides the aeronautical experience required to qualify for the instrument rating under Part 141 Federal Aviation Regulations. This FAA Part 141 approved course minimum represents 35 flight hours, and 55 instructional hours to include four stage exams. In order to receive credit for the course, the student must have earned the FAA instrument rating.

Hourly costs: Aircraft $145/hr. Instruction $59/hr. Fuel surcharge applies if cost is over $5.00/gal. Should the cost go up to $5.50/gal, a $.50/gal cost is added to aircraft charges, and anything below is at no extra charge to the student.

No Show Fee: Represents cost of aircraft and instructor time scheduled for the event.

*Note: VA will not pay any penalty fee; such costs are solely the responsibility of the student. VA does not cover this cost.

Final Examination Fee: This course qualifies for in-house examination at $500. If using a Designated Pilot Examiner (DPE) from $600 - $950. No cost is incurred if scheduled directly with FAA. Final exam expense is solely the responsibility of the student. VA does not cover this cost.

*Note: Pilot training is a proficiency based process. Times specified are the minimum to meet FAA approved course Part 141 training requirements. Individual training times may be more than minimums if additional time is required to demonstrate proficiency in prescribed lesson elements, or to repeat lessons which were incomplete, or unsatisfactory. Students should allow approximately 15% additional cost for each flight course. VA will not cover costs associated with hours above the course minimums.

ATF2400 Multi Engine Flight Training* Credit Hours: 1
This course is taught under Federal Aviation Regulation FAA Part 141. It provides the flight training experience and aeronautical knowledge required to obtain a FAA multi-engine rating. Course consists of 15 flight and 30 instructional hours to include four stage exams. In order to receive credit for the course, the student must have earned the FAA
multi-engine rating.

**Hourly costs:** Aircraft multi-engine $250/hr. Instruction $59/hr. Fuel surcharge applies if cost is over $5.00/gal. Should the cost go up to $5.50/gal, a $.50/gal cost is added to aircraft charges, and anything below is at no extra charge to the student.

**No Show Fee:** Represents cost of aircraft and instructor time scheduled for the event.

**Final Examination Fee:** This course qualifies for in-house examination at $500. Costs vary per Designated Pilot Examiner (DPE) from $600- $950. No cost is incurred if scheduled directly with FAA. Final exam expense is solely the responsibility of the student. VA does not cover this cost.

*Note: Pilot training is a proficiency based process. Times specified are the minimum to meet FAA approved course Part 141 training requirements. Individual training times may be more than minimums if additional time is required to demonstrate proficiency in prescribed lesson elements, or to repeat lessons which were incomplete, or unsatisfactory. Students should allow approximately 15% additional cost for each flight course. VA will not cover costs associated with hours above the course minimums.*
ATF2500 Certified Flight Instructor Training*  
Credit Hours: 2  
This course provides the flight and ground instruction required to earn the FAA Certified Flight Instructor certificate. FAA Part 141 approved course minimums, exclusive of the final check ride represent 31 flight and 51 instructional hours to include three stage exams. In order to receive credit for the course, the student must have earned the FAA Certified Flight Instructor certificate. **Hourly costs:** Aircraft 20 hours C172, PA28 $145/hr., 10 hours PA28R $149/hr., 1 hr. 8KCAB $160/hr. 51 Instructional hours $59/hr. Fuel surcharge applies if cost is over $5.00/gal. Should the cost go up to $5.50/gal, a $.50/ gal cost is added to aircraft charges, and anything below is at no extra charge to the student. **No Show Fee:** Represents cost of aircraft and instructor time scheduled for the event. **Final Examination Fee:** Costs vary per Designated Pilot Examiner (DPE) from $600 - $1,000. No cost is incurred if scheduled directly with FAA. Final exam expense is solely the responsibility of the student. VA does not cover this cost.  
*Note: Pilot training is a proficiency based process. Times specified are the minimum to meet FAA approved course Part 141 training requirements. Individual training times may be more than minimums if additional time is required to demonstrate proficiency in prescribed lesson elements, or to repeat lessons which were incomplete, or unsatisfactory. Students should allow approximately 15% additional cost for each flight course. VA will not cover costs associated with hours above the course minimums.

ATF2600 Instrument Flight Simulator Training  
Credit Hours: 1  
This course provides a total of 15 hours of training in one of the Emil Buehler Flight Laboratory flight training devices at South Campus. This course may be taken as an elective in any of the aviation programs. Material covered will be tailored to the individual depending upon his/her piloting background. This course may be repeated for a maximum of 3 semester hours to meet a 3-semester hour elective requirement.

ATF2630 Multi Engine Simulator Training  
Credit Hours: 1  
This course provides a total of 15 hours of training in one of the Buehler Flight Laboratory multi-engine flight training devices at South Campus. The course consists of 5 hours of lecture and 10 hours in the flight training device. This course may be taken as an elective in any of the aviation programs.

ATT1100 Aeronautical Science  
Credit Hours: 3  
This course is an introduction to the theory of flight. It includes elementary aerodynamics, the major components of airplanes and their functions, pertinent Federal Aviation Administration (FAA) regulations, basic airspace, aircraft performance, basic navigation, an introduction to meteorology, weather services, and human factors affecting flight. Successful completion of ATT 1100 (48 hours) and ASC 1100 (48 hours) fulfills private pilot ground school requirements through Broward College’s Part 141 approved pilot ground school curriculum and prepares students for the FAA private Pilot (airplane) Computerized Knowledge Exam.

ATT2110 Commercial Flight Theory  
Credit Hours: 3  
This course provides the aeronautical knowledge required of a commercial pilot. Subject matter focuses on the needs of the advanced pilot. Topics include aerodynamics, aircraft performance, aircraft systems, navigation, physiological factors and flight, weather, and pertinent FAA regulations. Successful completion of ATT2110 (48 hours) fulfills commercial pilot ground school requirements through Broward College’s Part 141 approved pilot ground school curriculum and prepares students for the FAA Commercial Pilot (airplane) Computerized Knowledge Exam.

ATT2120 Instrument Flight Theory  
Credit Hours: 3  
Successful completion of ATT 2120 (48 hours) together with ASC 2110 (48 hours), fulfills instrument pilot ground school requirements through Broward College’s Part 141 approved pilot ground school curriculum and prepares students for the FAA instrument rating (airplane) Computerized Knowledge Exam. Topics include physiological factors involved with instrument flying, the functioning of basic flight instruments and their use in controlling aircraft under instrument conditions, electronic aids and their use, communications, the airway system, IFR charts, weather, pertinent Federal Aviation Administration (FAA) regulations, and procedures related to instrument flight.
ATT2820 Introduction to Air Traffic Control  Credit Hours: 3
This course covers fundamental topics such as history and an explanation of past decisions affecting current air traffic control systems, navigation, procedures and phraseology, separation of aircraft in the ATC system. The course will also provide an in-depth look at the future of air traffic control and employment opportunities for air traffic controllers.

ATT2821C ATC Radar Procedures with Laboratory  Credit Hours: 4
Topics such as radar rules and applications required by FAA Order J07110.65V. Chapters 4, 8, and 6 are covered in this course. This course will be adapted to mirror a radar position in operation at Academy TRACON. In doing so, this course will teach the student the basic requirements needed to work as a radar controller in a terminal facility. Topics taught will include radar systems, radar identification, radar separation, vectoring, phraseology, and issuing approach clearances. The Laboratory portion will mirror the Academy TRACON RADAR position.

ATT2822C VFR Tower Operations with Laboratory  Credit Hours: 4
This course covers the J07110.65 Air Traffic Control Manual Chapter 3. Chapter cover fundamental rules and procedures required in a VFR tower for the safe and orderly flow of aircraft operating in a VFR or IFR environment. This course teaches the requirements needed in a terminal facility that utilizes air/ground communications, visual signaling, and other devices to provide ATC services to aircraft operating in the vicinity of an airport or a movement area. The Laboratory portion will mirror the Academy Airport. The student will be required to demonstrate practical application of the rules and procedures in use at the airport.

ATT2824C ATC Enroute Operations with Laboratory  Credit Hours: 4
This course covers the J07110.65 Air Traffic Control Manual Chapters 5, 6, 7, 8, 9, 10, 11, 12, and 13, J07350.7 Location Identifiers, IFR Enroute Low and High Altitude Charts. These orders cover the fundamental rules and procedures required in the Enroute environment commonly referred to as the CENTER. This course will teach the requirements needed to an Enroute facility that utilizes air/ground communications and other devices to provide ATC services to aircraft operating along the Federal Airways and Jet Route Systems. The Laboratory portion will mirror a sector in operation at Miami Center. The student will be required to demonstrate practical application of the rules and procedure in use at this center sector.

ATT2890 ATC Capstone Project  Credit Hours: 1
This course covers the practical application of JO7110.65 Air Traffic Control Manual. The course will evaluate what the student has learned and retained throughout the CTI program. The student will be required to successfully complete a 100-question exam covering the CTI prerequisite Courses and demonstrate the practical applications in Center Radar Simulation, Terminal Radar Simulation, and Tower Simulation. Students successfully completing the exam and practical will take the Certified Tower Operator's Exam administered by an FAA examiner the last week of class.

AVM1440 Airport & Airline Security  Credit Hours: 3
An introduction and analysis of the regulations and laws governing airport and airline security, including an in-depth look at Federal Aviation Regulations 49 CFR 1544, FAR Part 121, 129, and 49 CFR 1520; Topics of discussion include: a historical perspective and events that have led to the evolution of aviation security; preventive measures, and current trends in security; an introduction to terrorist activities, motives, weapons of mass destruction, and countermeasures at threats to aviation.

AVM1940 Airport Operations Internship I  Credit Hours: 3
Practical application of acquired knowledge at a certificated airport. Student exposed to airside related environment including: airfield inspections; security inspections and enforcement; air traffic control system; navigational aids; airspace inspections & familiarizations; wildlife issues; environmental impacts; landside issues such as parking management, ground transportation systems; operational contract administration; revenue control systems; equipment monitoring; and bus operations; terminal building operations including, physical building inspections, passenger services, passenger flow characteristics; tenant and contractual lease requirements; safety and security of passenger terminals. The student is introduced to airport maintenance programs and systems as well as general aviation environment.
AVM2301 General Aviation Marketing & Management  
This course is designed to provide an overview of the general aviation industry including its history and important role within the air transportation sector of the economy. The varied uses of general aviation aircraft and the management and marketing role of the fixed base operator are thoroughly explored. Included are the basic marketing concepts and procedures involved in the sale of general aviation aircraft and components to private industry and government. Particular emphasis will be placed on the management of corporate/business aircraft and commuter airlines.

AVM2410 Airport Management  
Provides a comprehensive examination of the major functions of airport management and the concepts underlying airport planning and construction. The controlling factors in the development of an airport, such as size and forecasting volumes, design considerations; including runways configurations, site, location requirements, master planning and zoning laws will be examined. The socioeconomic effect of airports on the communities they serve will be explored.

AVM2450 Airport Planning & Design  
Introduction to the initial design of airports and adaptations made as airports experience growth. Topics of discussion include: analysis of runway and taxiway design, terminal ramp areas, terminal facilities, airport parking and roadway systems based on airport capacity forecasts; intended use, funding, and community demographics. Discussions also include the modification and adaptation of existing airport facilities, airport master plans, air cargo facilities, airport access, and environmental impacts of airport planning and design.

AVM2510 Airline Management  
An introduction to the administrative aspects of airline operation and management. Topics include the structure of the airline industry in the United States including first, second, third level carriers, the annual profit plan, uniform system of accounts and reports, organizational planning, demand analysis, scheduling, the theory of pricing, fleet planning, facilities planning and airline financing.

AVM2941 Airport Operations Internship II  
Practical application of acquired knowledge at a certificated airport. The student will be exposed to the finance, business, legal, and public relations aspects of Airport Management. Intern will: gain experience in the collection of rents and allocation of monies in airport operation. Receive knowledge on how grant money is applied for and received as well as the business aspect of leasehold compliance; exposure to legal aspect of airport operation, including compliance with federal and state laws, liability claims and procedures. Exposure to Airport Planning, Airport Master Plan, construction and refurbishment of airport facilities, airport layout plan, and airspace studies. Work with airport public relations and marketing personnel on communicating with media and marking the airport as a business enterprise toward potential airlines and tenants.

AVM3030 Customer Relations in Aviation  
This class covers customer relations concepts as well as the application of good customer relations behaviors within an aviation-related organization.

AVM3443 Aviation Safety and Security  
This course covers all areas of aviation safety and security to include a review of incidents, accidents, safety studies, accident investigations and changes which would mitigate future risks. There is an emphasis on human factors including CRM and SMS as well as risk management concepts.

AVM3600 Human Resource Management in Aviation  
This class covers all aspects of human resource management in the aviation industry to include hiring, training, and disciplining as it relates to the role of the first-line supervisor's responsibilities. Aviation-related screening issues are also covered.

AVM3630 Employee Relations in Aviation
This class covers employee relations principles as it relates to the aviation industry. Issues in the diverse workplace and issues involving union contracts and negotiations are also covered. How a first-line supervisor should handle a multitude of employee issues will also be covered.

AVM4160 Aviation Planning
Credit Hours: 3
The planning process as it relates to the complexities of the aviation industry is covered along with different planning techniques with emphasis on the role of the first-line supervisor in the organizational planning process. The strategic planning process and its connection to the overall organizational budget are also covered.

AVM4170 Aviation Project Management
Credit Hours: 3
This class covers aviation-related project management concepts and applications. By the end of the term the student will identify and carry out an aviation-related project demonstrating their project management skills.

AVM4180 Quality Assurance in Aviation
Credit Hours: 3
This course covers the various types of total quality management systems (TQM) that are used in the aviation industry and the role of the first-line manager in contributing to the quality assurance program.

AVM4516 Domestic Aviation Operations
Credit Hours: 3
This class covers all the operational aspects of an aviation operation which operates within the United States including managing the facility, people, and product or services. It emphasizes the management responsibilities of a supervisor in insuring a successful operation.

AVM4523 Airline Operations II
Credit Hours: 3
This course continues Airline Operations I and covers fueling, loading, station operations, ground support equipment, cold weather operations, and the roles and responsibilities of airline personnel.

AVM4700 International Aviation Operations
Credit Hours: 3
This class covers aviation operations in an international environment. The addition of language, culture, religion, international regulatory bodies, tariffs, duties, customs, and the Immigration and Naturalization Service and how they impact the operation will be covered.

AVS0090C Avionics Fundamentals
Clock Hours: 180.00
Content includes but is not limited to troubleshooting, repair and installation of airborne radio communications, radio navigation and radar equipment systems in accordance with regulatory and industry standards. Skills preparation for passing licensing/certification tests required by industry forms an integral part of the curriculum. The course content also includes training in communication, leadership, human relations and employability skills; and safe, efficient work practices.

AVS0091C Avionic Installer
Clock Hours: 180.00
Content includes but is not limited to troubleshooting, repair and installation of airborne radio communications, radio navigation and radar equipment systems in accordance with regulatory and industry standards. Also included is instruction in basics of AM and FM transmitters and receivers and avionics equipment. Skills preparation for passing licensing/certification tests required by industry forms an integral part of the curriculum. The course content also includes training in communication, leadership, human relations and employability skills; and safe, efficient work practices.

AVS0092C Avionics Communication Systems
Clock Hours: 180.00
The purpose of this program is to prepare students for employment as radio mechanics (85514608) and as avionics technicians (823.281-010). The course content includes, but is not limited to, troubleshooting, repair and installation of air-borne radio communications, radio navigation, and radar equipment systems in accordance with regulatory and industry standards. Also included is instruction in basics of AM and FM transmitters and receivers and avionics equipment. Skills preparation for passing licensing/certification tests required by industry forms an integral part of the curriculum.
The purpose of this program is to prepare students for employment as radio mechanics (85514608) and as avionics technicians (823.281-010). The course content includes, but is not limited to, troubleshooting, repair and installation of air-borne radio communications, radio navigation, and radar equipment systems in accordance with regulatory and industry standards. Also included is instruction in basics of AM and FM transmitters and receivers and avionics equipment. Skills preparation for passing licensing/certification tests required by industry forms an integral part of the curriculum. The course content also includes training in communication, leadership, human relations and employability skills; and safe, efficient work practices.

AVS1010 Introduction to Avionics
Credit Hours: 3
This course will expose students to the history, integration and growth of the avionics industry. When complete, students will be able to explain a brief history and role of basic aircraft avionic systems and components and their function, role and interaction with other systems. Students will understand basic data-bus communication and standards.

AVS2700C Avionics Component Repair and Calibration
Credit Hours: 3
This course will expose students to an avionics shop environment. Students will be able to demonstrate repair capabilities and isolation techniques to the component level (i.e. resistor) for avionics equipment. Students will demonstrate and understanding and the proper use of avionics shop equipment to include generators, oscillators, frequency counters, oscilloscopes, etc.

AVS2760C Introduction to Advanced Avionics
Credit Hours: 3
This course will introduce students to recent advances in avionics systems. Modern changes within the last 10 years will be discussed, as will changes which are imminent. Students will understand the growing complexity of avionics systems and will learn how these changes will impact the industry in the near future.

AVS2770C Introduction to Avionics Engineering
Credit Hours: 3
This course will expose students to the principles of avionics engineering, including specialized equipment, tools, software, and circuit creation using Computer Aided Drafting (CAD) programs. Students will be able to explain and create proper technical drawings and explain the rationale for details in production.

AVS2930C Engineering Technologies in Avionics
Credit Hours: 3
This course will expose students to emerging technology that affects the future of the avionics industry. Students will be able to identify emerging technology and acceptance and use. Students will show understanding in basic knowledge of how new technology works and interacts with existing technology.

BCH3023 Elementary Organic & Biological Chemistry
Credit Hours: 3
This course is designed to introduce elementary organic chemistry and biochemistry to students in the environmental science curriculum. This is a terminal course and is not part of the regular organic chemistry sequence.

BCH3033 Biochemistry I
Credit Hours: 3
The study of the structure and function of biomolecules within the cell (proteins, carbohydrates, lipids, and nucleic acids), and the monomeric units that make them. Biological transport in cell membranes, enzyme catalysis, DNA replication and transcription, and protein synthesis will also be studied.

BCN1210 Construction Materials
Credit Hours: 4
This is the first in a two-course sequence of construction drawing Courses. The first half of the semester will include a review of basic drafting techniques. The second half will be devoted to an in-depth study of residential construction working drawings and how they are prepared. AutoCAD will be used extensively as one of the tools for preparing drawings.

BCN1251C Building Construction Drawing I
Credit Hours: 4
This is the first in a two-course sequence of construction drawing Courses. The first half of the semester will include a review of basic drafting techniques. The second half will be devoted to an in-depth study of residential construction working drawings and how they are prepared. AutoCAD will be used extensively as one of the tools for preparing drawings.

**BCN1272 Building Construction Plans Interpretation**  
Credit Hours: 2  
This course is designed to provide an overview of construction documents and to develop the student's ability to quickly interpret working drawings. Emphasis is on architectural and structural details with limited coverage on mechanical and electrical aspects.

**BCN2253C Building Construction Drawing II**  
Credit Hours: 4  
Principles and practices of computer aided drafting (CAD) employed in the construction industry.

**BCN2560 Mechanical & Electrical Systems**  
Credit Hours: 3  
Fundamentals of heating, air conditioning, water supply, sanitation, and electrical service and their installation along with equipment and controls with a focus on Florida Building Code requirements. Sustainability standards and their role in the construction process will be discussed.

**BCN2614C Construction Estimating II**  
Credit Hours: 3  
A study of construction contracts, contractor responsibilities, job planning, scheduling, selection of equipment, methods of construction and safety standards. The student is required to make quantity takeoffs from a set of plans to do pricing of labor and materials.

**BCN2721C Construction Planning & Cost Control**  
Credit Hours: 3  
The student plots job progress, draw schedules; studies cash flow, billing, financing, job ledgers inventory, collection methods, payroll, overhead, financial statements, balance sheets, income statements, net worth, equipment and property purchases, credit and borrowing principles, term interest, points and closing cost, depreciation, and financial ratios. The student studies the effects on pricing of variation in delivery time, quantities, payment terms, purchase orders, sub-contracting, inventory and other aspects of cost control.

**BCT1706 Construction Documents**  
Credit Hours: 2  
This is designed to familiarize students with documents used in the construction industry, facets of the construction process, contractual relationships, the relationship of documents to each phase of construction and an overview of the Construction Specifications Institute's (CSI) 16 divisions. At the conclusion of the course, students will have gained the proficiency necessary to pass the Construction Documents Technologist (CDT) certification exam given by the CSI.

**BCT1743 Building Construction Law**  
Credit Hours: 3  
A study of the legal aspects of construction contracts and the responsibilities arising particularly from the field operations. Also includes relationship of general contractor to owner, architect, and subcontractor; mechanics lien law; bonds; labor law; and other statutes and ordinances regulating contractors.

**BCT1767 OSHA Standards**  
Credit Hours: 2  
This course is designed to give students an awareness of the hazards associated with the construction industry’s working environment. Emphasis is on OSHA regulations and the knowledge to improve the overall safety on a job site. At the successful conclusion of the course, students will receive the OSHA 10 Construction Industry certification card.

**BCT1770 Construction Estimating I**  
Credit Hours: 2  
An analysis and determination of building construction costs. Commences with the classification of materials, labor, and subcontracted work into the smallest manageable units. Development of a simple estimate for a residential structure.

**BCT2040 MEP Plans Interpretation**  
Credit Hours: 2
This course is designed to develop the student's ability to quickly interpret working drawings. Emphasis is on mechanical, electrical, and plumbing plans, details, and specifications.

**BCT2710 Infrastructure Coordination**  
Credit Hours: 2  
This course provides the student with an overview of the various agencies related to the construction industry. Special emphasis is on the need for and the manner of coordinating with these agencies. Students will receive exposure to the variety of permits, learn to interface with the agencies in order to coordinate the permit process, and understand how this coordinates with the project.

**BCT2720C Construction Scheduling**  
Credit Hours: 3  
Orderly flow of steps from start to finish in a construction project. Basic concepts and techniques of the PERT AND CPM methods of network planning and scheduling will be covered. Course will develop skills necessary to successfully apply the Critical Path Method to the construction industry and answer the critical path problems found on the state certification exam.

**BCT2760 Building Codes & Regulations**  
Credit Hours: 3  
A rigorous review and study of the Florida Building Code as it applies to structures and safety. For professionals employed as inspectors, architects, engineers and contractors.

**BCT2771 Building Construction Advanced Estimating**  
Credit Hours: 3  
Estimating more advanced elements of building construction. Students will learn to calculate direct, indirect, and overhead costs, as well as prepare bid proposals and related documents for commercial buildings.

**BCT2941L Building Construction Field Experience**  
Credit Hours: 3  
This course provides students with the opportunity to apply skills learned in the classroom to a job setting and gain work experience in construction management.

**BOT2010 General Botany**  
Credit Hours: 3  
Course designed to treat entire plant kingdom with emphasis on structure, function, and genetics of flowering plants. Fundamental cell and tissue structure of both vascular and non-vascular plants are studied. Associated physiological and chemical effects as related to function are emphasized. Placement by Testing Department.

**BOT2010L General Botany Laboratory**  
Credit Hours: 1  
Laboratory experiments and field trips to accompany BOT2010. Upon successful completion of this course, the students should be able to demonstrate knowledge of the plant kingdom through prescribed activities that focus on morphology, taxonomy, anatomy and physiology of selected representative specimens. Dissection exercises included.

**BOT2800 Plants & People**  
Credit Hours: 3  
This course will emphasize the role of plants in the development of civilizations, and the influence of plants on world history, politics, economics and culture. Will survey important plants and plant products from different cultures around the world.

**BRC2001 Introduction to the Financial Institution**  
Credit Hours: 3  
This course is designed to provide an introduction to financial institutions, with a focus on banks, and to the services offered by those institutions. Topics will include: the history and evolution of the American financial system; the different types of financial institutions; the basic functions of financial institutions; the core products and services offered by financial institutions in America; security and fraud detection; and principles of personal, commercial and mortgage lending.

**BSC1005 Biological Principles for Non-Majors**  
Credit Hours: 3  
Course designed to give students an understanding of principles of Biology, while focusing on the nature and activities
of living organisms. Course primarily for non-science majors.

**BSC1005L Biological Principles for Non-Majors Laboratory**  Credit Hours: 1
Two hours of laboratory weekly which provides hands on activities that develop basic laboratory skills while reinforcing basic concepts in biology. Dissection exercises may be a component of this course.

**BSC1084 Basic Anatomy and Physiology**  Credit Hours: 3
A basic anatomy and physiology course for students in allied health fields. The curriculum provides a brief introduction to physiological chemistry and physics, a study of basic cell biology, and a survey of human anatomy and physiology through the study of each organ system. Selected topics of pathology are introduced as appropriate to the audience. This course is not a substitute for anatomy and physiology I (BSC 2085) and anatomy and physiology II (BSC 2086). Students who have successfully completed anatomy and physiology I (BSC 2085) or anatomy and physiology II (BSC 2086) with a grade of C or better may not enroll in BSC 1084. Additionally, BSC 1084 cannot be used as a substitute for BSC 2085 or BSC 2086, when required for a specific program of study.

**BSC1311 Introduction to Marine Biology**  Credit Hours: 3
This course is designated to introduce non-science major students to the physical, chemical, and biological features of the world ocean and the main groups of living marine organisms that inhabit it. Basic marine ecology will be included.

**BSC2010 Introduction to Biology I**  Credit Hours: 3
This course is the first of a two-semester sequence introducing science majors to biological principles including cell structure, function, communication, reproduction, biochemistry and metabolism, classical and molecular genetics, and genetic engineering. Upon successful completion of this course, the students will be able to explain the methods of science, describe the characteristics of life, describe structure, function, and communication of cells, distinguish mitosis and meiosis, describe cell energetics, photosynthesis and respiration, solve genetics problems, and describe major advances in genetic engineering. Three hours lecture per week.

**BSC2010L Introduction to Biology I Laboratory**  Credit Hours: 1
This laboratory course is the first of a two-course sequence introducing science majors to biological principles including cell structure and function, cell reproduction, biochemistry and cell metabolism, classical and molecular genetics, and genetic engineering. Three hours laboratory per week.

**BSC2011 Introduction to Biology II**  Credit Hours: 3
This course is the second of a two-course sequence introducing science majors to biological principles including a study of the diversity of organisms, evolution and population dynamics, and ecology.

**BSC2011L Introduction to Biology II Laboratory**  Credit Hours: 1
This course is the second of a two-course sequence introducing science majors to biological principles including a study of the diversity of organisms, evolution and population dynamics, and ecology. Dissection exercises included.

**BSC2085 Human Anatomy & Physiology I**  Credit Hours: 3
A survey of the structure, function, and chemistry of the human body considering the following topics: chemistry, body organization, the cell, tissues, membranes, glands, the integumentary system, the skeletal system, the muscular system, the nervous system, and the special senses. Three hours of lecture per week.

**BSC2085L Human Anatomy & Physiology I Laboratory**  Credit Hours: 1
A survey of the structure, function, and chemistry of the human body considering the following topics: chemistry, body organization, the cell, tissues, membranes, glands, the integumentary system, the skeletal system, the muscular system, the nervous system, and the special senses. Three hours of lecture per week.
BSC2086 Human Anatomy & Physiology II  Credit Hours: 3
A continuation of the Anatomy and Physiology sequence, including the following topics: the circulatory system, the respiratory system, the digestive System, the urinary system, fluid and electrolytes and the reproductive System.

BSC2086L Human Anatomy & Physiology II Laboratory  Credit Hours: 1
Laboratory experiments coordinated with BSC1086, including microscope observation, study of anatomical models and dissection. Dissection exercises included.

BSC2421 Introduction to Biotechnology  Credit Hours: 3
This lecture-based course provides an introduction to concepts and principles associated with current accepted biotechnological practices in the areas of laboratory safety cell culture techniques, laboratory skills (measurements and calculations, preparation of solutions, use of various instruments) and microscopy. In addition, methods of DNA extraction, amplification, gene cloning, nucleic acid and protein electrophoresis and DNA fingerprinting will be covered.

BSC2421L Introduction to Biotechnology Laboratory  Credit Hours: 1
This laboratory course provides hands-on experience in basic and common biotechnology laboratory techniques in the areas of laboratory safety, culture techniques, laboratory skills (measurements and calculations preparations of solutions, use of various laboratory instruments), and microscopy. In addition, methods in DNA extraction and amplification, gene cloning, nucleic acids, and protein electrophoresis and finger-printing will be demonstrated.

BSC2910 Directed Independent Research  Variable Credit Course (1-3 Credit Hours)
Students (individually or in a group) will conduct research projects or certain aspects of research projects under the supervision of the instructor. This course is intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and reporting. Hours may vary.

BSC2949 CO OP Work Experience  Credit Hours: 3
A course designed to provide training in a student’s field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration.

BSC4846 Scientific Communication  Credit Hours: 3
Introduces students interested in scientific research to various techniques and software important for data processing and presentation of research data. Students learn to effectively present research to the general public and to the scientific community in written form, such as research proposals, conference presentations, seminars and publications.

BSC4911 Independent Research in the Biological Sciences  Credit Hours: 1-4
Students (individually or in a group) will conduct research projects or certain aspects of research projects. This course is intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and reporting. Hours may vary. Instructor permission required. The instructor may incorporate any 5 or more objectives as appropriate to the given student project.

BSC4930 Special Topics in Biological Science  Credit Hours: 3
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Hours may vary.

BSC4948 Senior Internship  Credit Hours: 3
A course designed to provide training in a student’s field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer.

BTS3068 Foundations of Business Education  Credit Hours: 3
Business teacher education course which provides educators with the professional expertise necessary to teach the specialized content of office systems technology and business administration Courses. Prepares entry-level business educators for State of Florida certification in business education.

**BUL2241 Business Law I**  
Credit Hours: 3  
This course covers basic principles of law and their application to business problems. Topics include a discussion of legal rights and social forces; the legal relationships of government, business and society; law of contracts; personal property, bailments, sales of goods, torts and business crimes.

**BUL2242 Business Law II**  
Credit Hours: 3  
This course provides a study of the legal principles covering negotiable instruments, debtor-creditor law, including bankruptcy; agency, employer-employee relations; insurance; business organizations; and real property, including property ownership and landlord-tenant relations.

**BUL3130 Business Law & Ethics**  
Credit Hours: 3  
This course explores the nature of legal, ethical and societal environments of business. Emphasis is placed on business's social, legal, political and ethical responsibilities to both external and internal groups for business. Topics include corporate social responsibility, legal, political, and ethical aspects of business, state and federal laws, contracts, intellectual property, employment law, product liability, safety issues and environmental regulation.

**BUL4264 International Business Law**  
Credit Hours: 3  
Students will apply legal concepts of transacting business across national borders. The focus will be on transactional international business law including, the legal and ethical environment of international business, international contracting, importing-exporting, trade finance, and international intellectual property law, trade agreements and licensing. The student will gain an appreciation of the special risks of conducting business internationally and the legal pitfalls associated with those risks.

**CAP2760C Intro to Data Analytics**  
Credit Hours: 3  
This course teaches how to use data to analyze all aspects of a company’s operation and make appropriate business decisions. It focuses on Web-oriented data, and methods for analyzing data in order to create appropriate dashboards, reports and solutions. Practice will also be provided to thoroughly prepare students for the CIW Data Analyst certification exam.

**CCJ1020 Introduction to Criminal Justice**  
Credit Hours: 3  
Introduction to the historical and philosophical background of the agencies of the Criminal Justice System. An examination of the relationships between the police, courts and correctional systems.

**CCJ2191 Human Behavior in Criminal Justice**  
Credit Hours: 3  
A consideration of human behavior and how it relates to the duties and responsibilities of the criminal justice practitioner.

**CCJ2933 Corrections Practicum**  
Credit Hours: 3  
This course offers practical experiences in corrections or related disciplines of criminal justice giving the student the opportunity to apply classroom knowledge.

**CCJ2949 CO OP Work Experience**  
Credit Hours: 3  
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Student will be assigned specific course prefixes related to their academic major prior to registration.

**CDA2332C Systems Integration and Architecture**  
Credit Hours: 3
This course provides the student with a detailed understanding of computer hardware and system software. The material covered in this course is intended to establish a platform of technical knowledge for systems analysis, design, configuration, procurement, and management.

CDA4411 Systems Integration and Architecture  
This course provides the student with a detailed understanding of computer hardware and system software. The material covered in this course is intended to establish a platform of technical knowledge for systems analysis, design, configuration, procurement, and management.

CEN4341 Platform Technologies  
IT professionals will encounter a variety of platforms in their career. The role of the IT professional is to select, deploy, integrate and administer platforms or components to support the organizations IT infrastructure. This knowledge area includes the fundamentals of hardware and software and how they integrate to form essential components of IT systems.

CEN4722 Human Computer Interaction  
This course will provide the student the necessary elements in understanding and accomplishing the Human Computer Interaction in the area of Information Technology. The student will learn user centered methodologies in the design, development, evaluation and employment of application and system software.

CET1114C Digital Techniques  
The study and application of digital logic circuits. Topics include binary, octal and hexadecimal number systems, Boolean algebra, Karnaugh mapping, logic gates, flip flops, counters, and registers, applications in combinational and sequential logic systems. Extensive laboratory practice.

CET1117C Microprocessors I  
Study of the organization and operation of a stored program digital computer with emphasis on CPU operation in response to assembly and machine language instructions. Methods of selecting and operating I/O devices under program control will also be studied. Course work includes sophisticated assembly language programming for the microprocessor.

CET1600C CISCO Networking I  
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

CET1610C CISCO Networking II  
This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPng, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks.

CET1630C Network Cabling Technologies  
This course is designed for students interested in the physical aspects of voice and data network cabling and installation. The course focuses on cabling issues related to data and voice connections and provides an understanding of the industry and its worldwide standards, types of media and cabling, physical and logical networks, as well as signal transmission. Students will develop skills in cable termination with both jacks and punch blocks, reading network design documentation, pulling and mounting cable, cable management, cable labeling, setting up telecommunications rooms, and patch panel installation and termination, as well as basic cable testing and
troubleshooting, and basic cabling calculations. This hands-on, lab-oriented course stresses documentation, design, and installation issues, as well as laboratory safety, on-the-job safety, and working effectively with others. The Panduit Network Infrastructure Essentials course will provide a good start in a career path leading to becoming a network technician, technical support specialist, maintenance technician, testing engineer, information systems planner, and systems integrator. This course will also assist in getting students ready to enter an electrical engineering degree program.

CET2123C Microprocessors II  Credit Hours: 4
Analysis of 8/16 bit microprocessors and micro-computers with emphasis on logic, timing and interfacing of the microprocessor. The student will design circuits and programs to interface memory and peripheral devices in a microprocessor based system. Extensive Laboratory practice is an integral part of this course. Students will design and develop a microprocessor project board as part of this course.

CET2486C Networking Technology  Credit Hours: 3
This course covers topics in networking technology including OSI communications, networking and services, as well as troubleshooting of networking devices and components. Networking optimization is also included.

CET2615C CISCO Networking III  Credit Hours: 3
This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement a WLAN in a small-to-medium network.

CET2625C CISCO CCNP I  Credit Hours: 3
This course provides students with the knowledge and skills necessary to use advanced IP addressing and routing in implementing scalable and secure Cisco ISR routers connected to LANs and WANs. The skills developed by students completing this course will help prepare them for the Cisco Route Exam.

CET2688C System Security Practitioner (SSCP)  Credit Hours: 4
This course will provide students with the knowledge and understanding of the Internationally accepted common body of knowledge encompassing seven (7) security domains including Access Controls; Security Operations & Administration; Risk Identification, Monitoring and Analysis; Incident Response and Recovery; Cryptography; Network and Communications Security; and Systems and Application Security.

CET2742C Advanced Networking  Credit Hours: 3
This course is for support professionals who are new to networking services and will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses various networking services. It also provides students with the prerequisite knowledge and skills required for implementing and administering directory services such as Microsoft Active Directory.

CET3620C CISCO Networking IV  Credit Hours: 3
This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students will also develop the knowledge and skills needed to implement virtual private network (VPN) operations in a complex network.

CET3660C CISCO CCNA Security  Credit Hours: 3
CCNA Security equips students with the knowledge and skills needed to prepare for entry-level security specialist careers. It provides a hands-on introduction to network security.
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<tr>
<td>CHD1334</td>
<td>Children's Literature &amp; Language Arts</td>
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This is an introductory course in basic computer and internet use. It covers computer hardware and software fundamentals (including the use of Windows), key productivity applications (including word processing, spreadsheets, and presentation systems), and living in an online world (including network fundamentals, e-mails, and the effective use of the Internet as a communication tool and information resource). Students will develop basic computer skills to aid them with college studies and workforce readiness. Hands-on use of a personal computer is required.

This course will give students the capability to learn the correct application of the principle features of Excel including creating and editing a workbook with multiple sheets, using a graphic element to represent data visually, creating and using workbook examples including professional-looking budgets, financial statements, team performance charts, sales invoices, and data-entry logs.

This course is an introduction to database management. Using appropriate database software, students will learn to maintain and manipulate data in an organized, accessible and accurate manner. Emphasis is placed on the use of microcomputer database management software for common business applications.

This course is an entry-level course that provides students with baseline technical knowledge and skills of Internet, intranet, and extranet technologies. Other topics include validating your HTML and CSS code, employing search engine optimization (SEO), using style sheets to format Web page content, and implementing fundamental design concepts. Students will gain a basic knowledge and/or competency of Internet skills and tasks in 2 core content areas: Internet Business Foundations and Site Development Foundations.

This is an intermediate-level course in computer applications software. Students will gain knowledge and experience in the use and capabilities of word-processing, spreadsheet, database, and presentation graphics applications. Through case studies, students will learn to develop comprehensive solutions to various types of problems. Integration between applications will be emphasized.

This course teaches development of E-Commerce web sites for back-end server applications. It stresses development of database information and manipulation for web delivery. Students should have complete knowledge of HTML and database management, before taking this course. Students will conceptualize and develop E-Commerce web sites.

Content and methods of planning developmentally appropriate activities to enhance children's cognitive, social, emotional, physical and creative development. Lesson plan formats and daily scheduling will be covered.

This course offers an understanding of theory in children's art, music, and movement activities and their practical classroom application through process oriented and teacher activities.

This historical perspective will guide a study of qualitative books, such as fairy tales, folk tales, poems, and nursery rhymes. The role of the teacher in the child's acquisition of communications skills will be investigated.
CHD1338 Math & Science for the Young Child  Credit Hours: 3
Designed to foster understanding of the development of mathematical thinking and the mental ability of the preschool child. The science portion will enable the pupil to become familiar with the concept and techniques of "sciencing."

CHD1940 Practicum I: Observation & Evaluation  Credit Hours: 3
Offers an opportunity to observe children in child care settings, gain understanding of their behavior and evaluate their environments.

CHD2441 Practicum II  Credit Hours: 3
Facilitates practical experiences in techniques of early childhood education. Requires qualified supervision in a school or center for preschool education.

CHD2800 Admin & Management in Early Childhood Education  Credit Hours: 3
This course will emphasize the design and operation of a childcare facility. Classroom exposure will emphasize and assess site selection, building design and supervisory functions, equipment selection, activity planning, scheduling, financing, budgeting, record-keeping, and marketing.

CHM1020 Introduction to Chemistry  Credit Hours: 3
Selected topics from general chemistry, organic chemistry and biochemistry. This course is designed specifically for Nursing and other Allied Health Technology students.

CHM1020L Introduction to Chemistry Laboratory  Credit Hours: 1
Laboratory experiments to accompany CHM1020.

CHM1032 Chemistry for Health Sciences  Credit Hours: 3
Selected topics from general chemistry, organic chemistry and biochemistry. This course is designed specifically for Nursing and other Allied Health Technology students.

CHM1032L Chemistry for Health Sciences Laboratory  Credit Hours: 1
Laboratory exercises to accompany CHM1032.

CHM1040 General Chemistry A (Expanded Sequence)  Credit Hours: 3
This is the first course in a three-semester sequence, CHM1040, CHM1041 and CHM1046. This sequence includes two laboratories: CHM1045L to be taken concurrently with CHM1041 and CHM1046L to be taken with CHM1046. Topics covered include: measurements, stoichiometry, atomic structure, periodic table, chemical bonding, ionic and covalent compounds, nomenclature, and formula writing.

CHM1041 General Chemistry B (Expanded Sequence)  Credit Hours: 3
This is the second course in a three-semester sequence which includes: CHM1040, CHM1041 and CHM1046. This sequence also includes two laboratories: (1) CHM1045L to be taken concurrently with CHM1041 and (2) CHM1046L to be taken with CHM1046. Topics covered include: gases, liquids, solids, solutions acid-base chemistry and ionic reactions, thermodynamics and some descriptive chemistry of non-metals.

CHM1045 General Chemistry 1  Credit Hours: 3
This is the first course in a two-semester sequence, CHM 1045 and CHM 1046. This sequence includes two laboratories: CHM 1045L to be taken concurrently with CHM 1045 and CHM 1046L to be taken with CHM 1046. This sequence is for students who have already had high school chemistry. Topics covered include: chemical measurements, stoichiometry, atomic structure periodic table, chemical bonding, inorganic compounds, nomenclature, formula writing, gases, liquids, solids, solutions acid-base chemistry and ionic reactions and some descriptive chemistry of non-metals. To enroll, it is strongly recommended that students have had previous chemistry at the high school or college level. If a student has not had prior experience in a chemistry course the CHM 1040/CHM 1041/CHM 1046 sequence is highly recommended.
CHM1045L General Chemistry I Laboratory
Laboratory experiments to accompany CHM1041 or CHM1045.

CHM1046 General Chemistry II
This is the final course of the two-semester general chemistry sequence: CHM1045 and CHM1046; and the final course of the three-semester general chemistry sequence: CHM1040, CHM1041, and CHM1046. These sequences include two laboratories: (1) CHM1045L to be taken concurrently with CHM1041 or CHM1045, and (2) CHM1046L to be taken with CHM1046. Topics covered include thermodynamics, kinetics, equilibrium, electrochemistry, coordination chemistry, descriptive chemistry of metals, nuclear chemistry and an introduction to organic chemistry.

CHM1046L General Chemistry II Laboratory
Laboratory experiments to accompany CHM1046E or CHM1046. Special fee charged. Upon successful completion of this course, the students should be able to use appropriate laboratory equipment to safely perform laboratory experiments that relate to the topics covered in CHM1046 or CHM1046E, to collect data accurately and to use those data to calculate a reasonable answer or come to a logical conclusion.

CHM2210 Organic Chemistry I
First part of a two-course sequence presenting the structure, preparation, reaction, and nomenclature of various classes of organic compounds and their derivatives. Reaction electronic mechanisms are interpreted and unified in the light of modern theory.

CHM2210L Organic Chemistry I Laboratory
Organic laboratory experiments and preparations to accompany CHM2210.

CHM2211 Organic Chemistry II
Second of the two-part organic chemistry course. A continuation of the study of the remaining classes of organic compounds including use of spectroscopic methods and an introduction to bio-organic molecules.

CHM2211L Organic Chemistry II Laboratory
Appropriate experiments and preparation to compliment CHM2211.

CHM3203 Organic & Biochemistry
This course introduces the pre-professional science educator to fundamental organic and biochemical concepts. This is a content course in the B.S. Degree in the BC Science Education Program. The course has been designed to enhance the understanding of organic and biochemical concepts essential for the K-12 classroom. This program has been designed to correlate chemistry concepts with the NSTA National Science Content Standards, the Florida Subject Matter Content Standards, and the Florida Sunshine State Science Standards.

CHM3203L Organic & Biochemistry Laboratory
This course accompanies the lectures in CHM3205 Survey of Organic Chemistry and Biochemistry. This is a content laboratory course in the B.S. Degree in the BC Science Education Program. The course has been designed to enhance the understanding of organic and biochemical concepts essential to the K-12 classroom. This program has been designed to correlate chemistry concepts with the NSTA National Science Content Standards, the Florida Subject Matter Content Standards, and the Florida Sunshine State Science Standards.

CIS1000C Introduction to Computer Science
This course is designed to provide students with a broad perspective of the field of Computer Science, from core issues and concepts inherent to the discipline of computing, to the various sub-disciplines of computer science. Topics include: Number Systems and Data Representation; Computer Components and Architecture including Gates and Circuits;
Problem Solving and Systems Development Methodologies; Low-Level and High-Level Programming Languages; Abstract Data Representations and Algorithms; Operating Systems, File Systems and Directories; Information Systems; Artificial Intelligence; Simulation, Graphics, and Other Applications; Networks and the World Wide Web.
CIS1001C Fundamentals of Information Technology  
Credit Hours: 3
This course covers the major aspects of the Information Technology (IT) industry and provides students with an overview and introduction to the core aspects of Information Technology including Network and Infrastructure Systems, Information Support and Services, Interactive Media and Programming and Software Development. This course focuses on an understanding and appreciation of the duties of information technology professionals and how each IT area relates to and interacts with the others. Upon completion of this course students will have the knowledge necessary to make educated choices about continued study in IT as well as understanding of the impact of technology on society and organizations of all types.

CIS1513C Project Management  
Credit Hours: 4
This course examines the organization, planning, and controlling of projects and provides practical knowledge on managing project scope, schedule and resources. Topics include project life cycle, work breakdown structure and Gantt charts, network diagrams, scheduling techniques, and resource allocation decisions. Concepts are applied through team projects and tutorials using project management software.

CIS2028 Information Systems  
Credit Hours: 3
This course is designed to provide students with a foundational understanding of Information Systems (IS) as they apply to the computer industry. Topics will include Information Systems fundamentals; IS infrastructure; Organizational and business strategies for Information Systems; Information Systems for commerce and collaboration business intelligence and Enterprise Information Systems; security, privacy and ethics for Information Systems; Change Management and ITIL.

CIS2530C Ethical Hacking II: Capstone  
Credit Hours: 3
Web and Data Security provides an overview of session hijacking, how to hack Web servers and database servers, as well as password-cracking techniques and Web application vulnerabilities.

CIS2910C Systems Development Capstone  
Credit Hours: 3
This capstone course is designed for the student to demonstrate his/her knowledge and skills applicable to IT entrepreneurship. This course is designed as a project-based experience focusing on an innovative, sequential process to turn ideas into a business or social venture. Students learn the process successful entrepreneurs use prior to launching a business to help reduce market risk and save time and money.

CIS2942 Cloud and Virtualization Internship  
Credit Hours: 3
An Internship will provide the student with practical work experience in the field. In preparation, the student will produce a resume to present to potential employers. The student will work a minimum of 144 hours. Prerequisite: All students must contact the Co-Operative Education Office to obtain registration approval.

CIS2943 Ethical Hacking Internship  
Credit Hours: 3
An Internship will provide the student with practical work experience in the field. In preparation, the student will produce a resume to present to potential employers. The student will work a minimum of 144 hours. Prerequisite: All students must contact the Co-Operative Education Office to obtain registration approval.

CIS2949 CO OP Work Experience  
Credit Hours: 3
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer.

CIS3347C Information Storage & Management  
Credit Hours: 3
Information Storage and Management (ISM) is a unique course that provides a comprehensive understanding of the various storage infrastructure components in data center environments. It enables participants to make informed decisions on storage-related technologies in an increasingly complex IT environment, which is fast changing with the adoption of software-defined infrastructure management and third platform technologies (cloud, Big Data, social, and mobile technologies). It provides a strong understanding of storage technologies and prepares participants for advanced concepts, technologies, and processes.
CIS3352C Ethical Hacking I  Credit Hours: 4
This course provides an in-depth understanding of how to effectively protect computer networks. Students will learn about the tools and penetration testing methodologies used by ethical hackers to protect corporate and government data from cyber-attacks.

CIS4253 Social & Professional Issues in IT  Credit Hours: 3
In addition to technical skills, an IT professional must understand the social and professional context of IT and computing, and adhere to ethical codes of conduct. This knowledge area covers the historical, social, professional, ethical and legal aspects of computing. It identifies how teamwork is integrated throughout IT and how IT supports an organization. It also stresses professional oral and written communication skills.

CIS4359C Ethical Hacking II: Capstone  Credit Hours: 3
This course is a continuation of Ethical Hacking I. It supports mastery of the nineteen Certified Ethical Hacking domains. It is a capstone course in which students are assessed based on the objectives of the CEH exam offered by the EC-Council.

CIS4361 Information Assurance & Security  Credit Hours: 3
The information technology (IT) professional must understand, apply, and manage information assurance and security (IAS) in computing, communication, and organizational systems. It is also important for the IT professional to provide users with a framework to be sufficiently security aware to be an asset to the organization rather than a liability. IAS includes operational issues, policies and procedures, attacks and defense mechanisms, risk analyses, recovery, and information security. It should also be noted that many of the essential educational activities in this knowledge area may be illegal if performed outside a controlled environment, or without proper authorization. It is the responsibility of each individual program to appropriately administer these activities.

CIS4518C PM Quality, Acquisitions, and Risk  Credit Hours: 3
Within a project management context, this course teaches the contributions of quality experts, provides conceptual material on acquisitions, to include program planning, execution, and control, and will provide students with the needed skills to identify risks and make preparations to diffuse and solve conflicts.

CIS4596 IT Capstone Project  Credit Hours: 3
This course will give the IT student the ability to utilize what he/she has learned from the IT Program and adapt it to a work environment. This will be accomplished by providing the student a senior project that includes first: project proposal, feasibility studies, identification of intellectual property, and a teamwork environment for project creation, and second; project support which includes: budgets, schedule management, communications through reports and presentations project testing, implementation and final approval.

CJC2000 Introduction to Corrections  Credit Hours: 3
Introduction to the historical events and social issues that have shaped the corrections (prison/jail) system in the U.S., and an examination of contemporary corrections in terms of structure, clients, management, staff, programs and prisoners’ rights.

CJC2162 Probation & Parole Procedures  Credit Hours: 3
Examines this important community-based treatment aspect of the corrections system, reviews philosophy and development, the pre-sentence investigation, and supervision methods. Juvenile practices are also included.

CJE1300 Intro to Criminal Justice Administration & Management  Credit Hours: 3
Introduction to principles of administration and managerial concepts characteristic of criminal justice organizations.

CJE2170 Comparative World Police Agencies  Credit Hours: 3
A survey of contemporary foreign law enforcement and criminal justice systems. Includes the operational and philosophical differences emerging from various cultural and legal systems. This course will include case and group
studies of selected countries.
CJE2400 Police Community Relations  Credit Hours: 3
A consideration of the significance of establishing good working relationships between the police and the public, including the complex factors that lead to successful police community relations.

CJE2580 Interviews & Interrogations  Credit Hours: 3
This course is designed to cover the techniques, methods, principles and issues of interviews and interrogations for criminal justice officers and investigators. Course offered through Deception Control, Inc., Ft. Lauderdale.

CJE2600 Criminal Investigation  Credit Hours: 3
The investigation activity of a police department is studied to evaluate its organization, function and relationship with other divisions and agencies. Emphasis is placed on the procedural aspects and methodology employed in the investigative process. The student will know the elements of preliminary and follow-up investigations, to include methods of crime scene search, collection and preservation of evidence, and chain of custody concepts.

CJE2640 Introduction to Criminalistics  Credit Hours: 3
An introduction to the scientific aspects of investigation known as criminalistics, with emphasis on crime scene techniques, the collection and preservation of evidence and the examination of evidence. Students will be familiarized with the capabilities and limitations of a police laboratory.

CJE2642 Criminalistics Practicum  Credit Hours: 3
The knowledge and skills developed in the prerequisites are coordinated in practical exercises which will develop expertise in the complete processing of crime scenes.

CJE2643 Advanced Forensic Investigation  Credit Hours: 3
This course explores the scientific and investigative methods used to solve serious crimes against persons. Topics include the advanced principles and theories in crime scene technology, such as specialized evidence collection, such as gun shot, blood splatter and bodies (distinguishing between causes of death, such as accidental, suicide or homicide; the use of autopsies; child and elderly abuse investigation.)

CJE2722 Polygraph Theory & Operations  Credit Hours: 3
Includes the history and development of the polygraph with further emphasis on mechanics of instrument operation, maintenance and calibration. Course offered through Deception Control, Inc. Ft. Lauderdale.

CJE2723 Test QUSTN Construction & Semantics/Personnel Screening  Credit Hours: 3
The construction of test questions appropriate to the personnel aspect of the polygraph is emphasized. Course offered through Deception Control, Inc., Ft. Lauderdale.

CJE2724 Test QUSTN Construction & Semantics/Criminal Cases  Credit Hours: 3
The construction of test questions appropriate to the criminal case aspect of the polygraph is emphasized. Course offered through Deception Control, Inc., Ft. Lauderdale.

CJE2725 Chart Analysis, Validity & Reliability  Credit Hours: 4
Validity and reliability of the polygraph is examined, along with an in-depth consideration of chart analysis. Course offered through Deception Control, Inc., Ft. Lauderdale.

CJE2726 Polygraph Operations Practicum  Credit Hours: 3
Types of polygraph techniques and examinations are considered with emphasis on conducting examinations in role playing situations in the laboratory. Course offered through Deception Control, Inc., Fort Lauderdale.

CJE2770 Forensic Photography & Visual Documentation  Credit Hours: 3
The student is taught specific skills necessary to visually document and photographically preserve crime scenes and evidence, from both technical and legal standpoints.
CJJ2001 Juvenile Justice  
Credit Hours: 3
An analysis of the criminal justice system as it relates to juveniles. Major topics include: police practices (such as detention, searches and interrogation) when dealing with juveniles, court procedure in juvenile cases and different theories of juvenile rehabilitation.

CJK0001 Introduction to Law Enforcement  
Clock Hours: 10.00
At the end of this course, students should be able to: understand the values and ethics required for criminal justice officers, understand the consequences of sexual harassment, describe the criminal justice system, describe the structure of criminal justice agencies.

CJK0012 Legal  
Clock Hours: 62.00
At the end of this course, students should understand the Fourth Amendment related to search and seizure, know what constitutes a lawful arrest, be able to articulate the legal justification for the use of force, understand the Fifth and Sixth Amendments related to interrogation of suspects, determine when a crime has been committed and the elements necessary to make an arrest for that crime, understand the legal rules and concepts of evidence, understand civil and criminal liability related to an officer’s performance of duties understand an officer’s duties and options in civil (noncriminal) incidents, be familiar with the legal considerations when dealing with juveniles.

CJK0013 Interactions in a Diverse Community  
Clock Hours: 40.00
Communicate effectively and professionally when interacting with people in a variety of circumstances, interact with an individual with physical or developmental disabilities, recognize the signs and symptoms specific to the disability, and provide the most appropriate intervention, interact with veterans in crisis, recognize potential emotional triggers, and recommend available resources, interact with persons exhibiting signs of mental illness using communications skills appropriate for the condition of the individual, and understand how to use the Baker Act for an involuntary examination, interact with a person threatening suicide, assess the risk of suicide, and provide services and stabilize the situation, interact with juveniles, assess their behavioral characteristics, and provide the most appropriate response to a call involving a juvenile, interact with a person suspected of substance abuse, apply officer safety skills, and understand how to use the Marchman Act for an involuntary admission, interact with an elderly individual, understand age-related conditions, and make referrals for appropriate intervention interact with homeless individuals, understand the increasing occurrence of homelessness, and identify related crimes, identify a crisis situation, recognize an officers duty to recognize, respond and intervene safely and professionally and understand the options available to the officer, and provide the most appropriate intervention, identify high risk by the groups characteristics and ideology and document criminal or suspected criminal activity.

CJK0014 Interviewing & Report Writing  
Clock Hours: 56.00
At the end of this course, students will: prepare and conduct basic interview to gather information, take notes, identify signs of deception, obtain statements, identify types of reports, forms, and logs, including crime, incident, use of force, disciplinary, traffic crash, organize information chronologically, categorically write reports, apply appropriate grammar and mechanics, apply agency procedures, evaluate report prior to submission, draft probable cause affidavit.

CJK0020 Vehicle Operations  
Clock Hours: 48.00
This course presents the dynamics of emergency vehicle operations and develops skills in operating a motor vehicle in the law enforcement environment. A demonstration of proficiency is required.

CJK0031 First Aid for Criminal Justice Officers  
Clock Hours: 40.00
This course provides life-saving skills development in emergency medical situations appropriate for the law enforcement officer, including: CPR and communicable diseases.

CJK0040 Firearms  
Clock Hours: 80.00
This course develops proficiency with the semi-auto pistol used by a law enforcement officer. Qualification is required at various lighting levels.
CJK0051 CMS Criminal Justice Defensive Tactics  Clock Hours: 80.00
This course is designed to provide the student defensive skills appropriate for the threat level, within Florida law. Demonstration of proficiency is required.

CJK0064 Fundamentals of Patrol  Clock Hours: 35.00
At the end of this course, students should be able to use radio equipment properly, identify the uses of mobile computer devices, and understand the uses of FCIC/NCIC/NLETS and other electronic database resources understand community-oriented policing and how it is implemented as a problem-solving model, and identify the SARA problem-solving model and its application in real life situations, understand officer safety issues, identify and avoid fatal errors, identify and manage stress, and maintain mental and physical fitness, prepare to patrol, know what a BOLO is and how to create and cancel a BOLO, respond to a call, approach a suspect, set up a perimeter, conduct a building search, make an arrest, transport a prisoner, and process the prisoner at a detention facility.

CJK0065 Calls for Service  Clock Hours: 36.00
At the end of this course, students should be able to respond to calls for service, including well-being and security checks, building alarms, environmental hazards, transportation requests, animal complaints, death notifications, and special event security, respond to disturbances, including crowd control, civil disturbances, civil standbys, and disorderly or irate people, respond to court orders, including arrests and civil processes, and assist with the execution of search warrants, respond to calls concerning vehicle fires, unattended, abandoned, or disabled vehicles, and roadway obstructions or damage, enforce parking violations, impound a vehicle, direct vehicle traffic, and direct pedestrian traffic, respond to people in crisis, including suicide incidents, threats from mental impairments, and situations involving alcohol or substance abuse.

CJK0077 Criminal Investigations  Clock Hours: 50.00
Conduct an initial investigation of crimes against persons, society, property, and economic crimes.

CJK0078 Crime Scene to Courtroom  Clock Hours: 35.00
At the end of this course, students should be able to: process a crime scene conduct a follow-up investigation provide testimony in different types of court proceedings.

CJK0084 DUI Traffic Stops  Clock Hours: 24.00
At the end of this course, students should be able to, understand the problem of and solutions for DUI, identify the DUI laws and related legal issues, identify the signs of alcohol or drug impairment, conduct a DUI traffic stop, follow the three-phase process of a DUI contact, demonstrate proficiency in conducting the Standardized Field Sobriety Tests, make an arrest decision based on specific clues, accurately complete the required documentation for a DUI arrest, provide clear and convincing evidence of DUI in court testimony.

CJK0087 Traffic Stops  Clock Hours: 30.00
At the end of this course, students should be able to: safely pull over a vehicle, identify and articulate the stop/violation, obtain necessary information from the driver/passenger, safely complete the stop, safely effect an arrest, accurately complete the required documentation for a traffic stop.

CJK0088 Traffic Crash Investigation Terms & Legal Considerations  Clock Hours: 32.00
Define and explain the terms and legal considerations associated with crash investigations Respond to a crash scene safely, Assess a crash scene properly, Secure a safe work environment at a crash scene, Provide emergency medical assistance to injured people at a crash scene, if necessary, Obtain pertinent information about a crash to determine how and why it occurred, Identify crimes revealed during a crash investigation, if any, Return a crash scene to normal as quickly as possible, Complete driver exchange of information properly, Take appropriate enforcement action, Document a crash correctly in appropriate crash report form.
CJK0092 Critical Incidents Clock Hours: 44.00
At the end of this course, students should be able to do the following: complete and pass Unit 1, IS-100.LEb Introduction to the Incident Command System and Unit 2, IS-700.a National Incident Management (NIMS). An Introduction, understand local emergency response plans, law enforcement duty-to-act requirements, and the role of law enforcement officers as first responders, know how to respond to an active shooter incident, plan for response to a natural disaster, identify weapons of mass destruction (WMD) and properly respond to WMD incident, including IEDs and VBIEDs, be aware of hazardous material class, name or identification number, identify actions to take to isolate a hazmat incident and choose protective actions to take in accordance with the Emergency Response Guidebook (ERG), recognize the indicators of and paraphernalia used in the manufacture of methamphetamine, describe the indicators of chemical suicide, properly respond to a bomb threat, assess the scene, and search a building or suspected bomb site.

CJK0096 Criminal Justice Officer Phys Fit Training-LE Clock Hours: 60.00
This course is designed to introduce the student to physical conditioning, aerobic capacity, and wellness conditioning and training.

CJK0221 Correctional X-Over to Law Enforce Intro & Legal Clock Hours: 47.00
This course is designed to provide transitioning officers a variety of introductory and legal training topics required for the new discipline (and not previously completed by the officer). In addition, this course is mandated by the Florida Criminal Justice Standards and Training Commission for inclusion in the Crossover from Correctional Officer to Law Enforcement Officer training program effective April 1, 2008. This is a limited access course. It requires active certification and employment as a State of Florida correctional officer.

CJK0222 Correctional X-Over to Law Enforcement Comm. Clock Hours: 56.00
This course is designed to provide transitioning officers specific communication skills required for the new discipline (and not previously completed by the officer).

CJK0223 Correctional X-Over to Law Enforcement Human Clock Hours: 32.00
This course is designed to provide transitioning officers specific skills related to human issues required for the new discipline (and not previously completed by the officer). These issues include, but are not limited to, crisis intervention, disability awareness, and responding to juveniles.

CJK0271 Correctional Probation Legal Clock Hours: 57.00
This course presents the structure and components of the Florida criminal justice system and the laws governing the duties of Correctional Probation.

CJK0272 Correctional Probation Interpersonal Comm. Skill Clock Hours: 44.00
This course presents the topics of interpersonal skills, verbal and written communication, officer survival, conflict resolution, crisis intervention and suicide prevention/intervention. Emphasis is on communications.

CJK0273 Correctional Probation Caseload Management Clock Hours: 40.00
This course presents the caseload management procedures for Correctional Probation Officers.

CJK0274 Correctional Probation Supervision Clock Hours: 88.00
This course presents the characteristics and behaviors of people a Correctional Probation Officer must supervise and the procedures and strategies for dealing with individuals under supervision.

CJK0275 Correctional Probation Investigations Clock Hours: 39.00
This course presents the techniques needed for a Correctional Probation Officer to conduct and document successful investigations.
CJK0276 Correctional Probation Management Info Systems  
Clock Hours: 27.00  
This course presents the fundamentals of the electronic information systems a Correctional Probation Officer must access.

CJK0281 Criminal Justice Officer Phys Fit Training CPO  
Clock Hours: 34.00  
This course is designed to introduce the student to physical conditioning, aerobic capacity, and wellness conditioning and training. It will help the student to better understand the need for a criminal justice officer to maintain physical conditioning.

CJK0293 Corr/Corr Prob to LE Overview of Law Enforcement  
Clock Hours: 64.00  
At the end of this course, students should be able to: understand the values and ethics required for criminal justice officers, understand the consequences of sexual harassment, describe the criminal justice system, describe the structure of criminal justice agencies, understand the Fourth Amendment related to search and seizure, know what constitutes a lawful arrest, understand the Fifth and Sixth Amendments related to the interrogation of suspects determine when a crime has been committed and the elements necessary to make an arrest for that crime, understand the legal rules and concepts of evidence, be able to articulate the legal justification for the use of force, understand an officer's duties and options in civil (noncriminal) incidents, be familiar with the legal considerations.

CJK0295 Crossover Correctional to Law Enforcement  
Clock Hours: 35.00  
The goal of this course is to prepare recruits physically to perform the duties of law enforcement, correctional or correctional probation officer. Students are required to participate in the total number of wellness hours associated with this cross-over training program.

CJK0296 Correctional to LE Reporting Procedures  
Clock Hours: 32.00  
Prepare and conduct basic interview, gather information, take notes, identify signs of deception, obtain statements, identify types of reports, forms, and logs, including: crime, incident, use of force, disciplinary, traffic crash, organize information chronologically, categorically, write reports, apply appropriate grammar and mechanics, apply agency procedures, evaluate report prior to submission.

CJK0297 Correctional to LE Interactions to Crisis Situations  
Clock Hours: 10.00  
At the end of this course, students should be able to: identify a crisis situation, recognize an officer's duty to recognize, respond and intervene safely and professionally and understand the options available to the officer, and provide the most appropriate intervention, interact with a person threatening suicide, assess the risk of suicide, and provide services and stabilize the situation, understand how to use the Baker Act for an involuntary examination understand how to use the Marchman Act for an involuntary admission, interact with veterans in crisis, recognize potential emotional triggers, and recommend available resources, identify high risk groups by the groups characteristics and ideology and document criminal or suspected criminal activity.

CJK0300 Introduction to Corrections  
Clock Hours: 32.00  
At the end of this course, students should be able to: understand the values and ethics required of criminal justice officers; understand amendments to the U.S. constitution applicable to corrections; determine when a crime has been committed; understand the chain of custody and concepts of evidence; be able to articulate the legal justification for the use of force; understand civil and criminal liability as related to an officer's performance of duties; understand the Fourth Amendment.

CJK0305 Communications  
Clock Hours: 40.00  
At the end of this course, students should be able to: interact professionally with inmates, visitors, and staff in a correctional setting; identify the root causes of miscommunication; use, understand, and interpret non-verbal cues; communicate properly using telephone equipment; communicate properly using portable radio unit; prepare for and conduct an interview; take notes; obtain statements when appropriate; sort information by category; arrange information in chronological order; follow correct format and content when writing a report; identify types of correctional officer reports; use proper elements of report writing; proofread and edit reports; write reports; use a computer for report writing. Course Requirements: students are responsible for reading and reviewing reports.
CJK0310 Officer Safety  
Clock Hours: 16.00  
At the end of this course, students should be able to: interact professionally with inmates, visitors, and staff in a correctional setting; identify the root causes of miscommunication; use, understand, and interpret non-verbal cues; communicate properly using telephone equipment; communicate properly using portable radio unit; prepare for and conduct an interview; take notes; obtain statements when appropriate; sort information by category; arrange information in chronological order; follow correct format and content when writing a report; identify types of correctional officer reports; use proper elements of report writing; proofread and edit reports; write reports; and use a computer for report writing.

CJK0315 Facility & Equipment  
Clock Hours: 8.00  
At the end of this course, students should be able to complete the following tasks within a correctional facility: identify common equipment; identify hazardous equipment; interpret responsibilities for equipment accountability; describe equipment storage procedures; list common procedures for issuing, receiving and documenting inventoried equipment; differentiate among weapons; list types of security equipment; identify hazardous materials; identify sensitive supplies; describe the proper handling of sensitive supplies; identify standards for security and inspections; describe methods for entering, exiting and moving within a facility; list elements important to maintaining good sanitation and health.

CJK0320 Intake & Release  
Clock Hours: 18.00  
At the end of this course, students should be able to: understand the process for accepting a subject into a county detention facility; understand the process for accepting an inmate into a state detention facility; search an inmate and his or her property for contraband; inventory an inmate's property for storage; know types of personal items issued to inmates; understand the importance of taking clear fingerprints; fingerprint a subject; know the relationship between the Florida Crime Information Center and the National Crime Information Center (FCIC/NCIC); understand the importance of getting accurate personal information from an inmate; know the legal issues involving criminal history information; understand the classification process for placing inmates in appropriate housing areas; know inmate security levels; understand the process for releasing an inmate; explain how to check for any outstanding holds or detainers on an inmate.

CJK0325 Supervising in a Correctional Facility  
Clock Hours: 40.00  
At the end of this course, students should be able to: effectively supervise daily operations at a correctional facility; apply the disciplinary process when an inmate commits a rule or law violation; recognize an inmate's distress or need, assess and refer an inmate to the appropriate service provider; manage the safety and security concerns associated with visitations, work-groups, transports and hospital details; use observational skills to monitor the behavior and activities of inmates; apply count procedures to accurately report the number of inmates within a facility/location; effectively supervise and monitor the dining process within a correctional facility; process mail according to agency rules and regulation.

CJK0330 Supervising Special Populations  
Clock Hours: 20.00  
At the end of this course, students should be able to: observe, identify, and effectively supervise diverse special population inmates within a housing unit in a correctional setting; maintain officer safety and a high level of professionalism when supervising special population inmates in a correctional setting; maintain care, custody, and control of special population inmates within a housing unit in a correctional setting.

CJK0335 Responding to Incidents & Emergencies  
Clock Hours: 16.00  
At the end of this course, students should be able to: identify and interpret the response to an emergency; describe the elements of an emergency plan and level of response; identify standard procedures and equipment used when responding to the following emergencies: - inmate escapes - medical emergencies - riots - hostage incidents - facility assaults - fires - hazardous materials - bomb threats - man-made and natural disasters; select the standard procedures for crime scene control; describe how to manage victims, witnesses and suspects; explain investigation and reporting.
techniques; describe procedures for the chain of custody for evidence.
Officer Wellness & Physical Abilities  
Clock Hours: 30.00  
At the end of this course, students should be able to do the following: improve their score on the final fitness evaluation; improve understanding of various elements of wellness, e.g., nutrition, weight control, and stress management; adapt a foundation for lifelong fitness.

CJ0392 Crossover Handgun Transition Course  
Clock Hours: 24.00  
Course is based on the current curriculum as developed by the Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission. This course is designed to familiarize the student with the safe weapon handling and identification of weapon nomenclature, parts and ammunition, handgun drawing and holstering, weapon loading and unloading, basic shooting principles, proficiency on the CJSTC Criminal Justice Firearms Courses of Fire with a handgun during daylight and nighttime, proficiency for weapon handling, and proper intervention for weapon malfunctions.

CJ0393 Cross Over Program Updates  
Clock Hours: 8.00  
This course is designed for instructors to deliver expanded updated instruction on curriculum topics contained in this cross-over program. The eight hours do not have to be taught in one block but may be distributed as needed throughout the program with the approval of the Training Center Director. For example, additional time may be used to integrate updated techniques or instruction from the high liability textbook, apply relevant case law, or review topics from the curriculum textbook not specifically designated for classroom instruction in this cross-over program.

CJ0422 Dart-firing Stun-gun  
Clock Hours: 8.00  
This course will introduce the student to the basics of both the stun-gun and the dart-firing stun-gun, and give them some fundamental knowledge of this emerging tool in criminal justice.

CJ0441C Police Service Aide  
Clock hours: 110.00  
This course is designed to provide students the minimum skills necessary to perform the duties of a Police Service Aide (PSA) and is approved by the Criminal Justice Standards and Training Commission as prescribed by Florida State Statute 316.640.

CJ0442 Traffic Accident / Crash Investigator  
Clock Hours: 80.00  
This course is designed to provide students the minimum skills necessary to perform the duties of a Parking Enforcement Specialist (PES) and is approved by the Criminal Justice Standards and Training Commission as prescribed by Florida State Statute 316.640.

CJ0451 Parking Enforcement Specialist  
Clock Hours: 16.00  
This course is designed to provide students the minimum skills necessary to perform the duties of a Parking Enforcement Specialist (PES) and is approved by the Criminal Justice Standards and Training Commission as prescribed by Florida State Statute 316.640.

CJL1062 Constitutional Law  
Credit Hours: 3  
An examination of the U.S. Constitution, its amendments and its impact on present day criminal justice practitioners.

CJL1100 Criminal Law  
Credit Hours: 3  
Course will be concerned with the sources and elements of criminal law. Emphasis will be placed on criminal law as related to law enforcement officers with particular attention given to the rights and responsibilities of officers in enforcing various criminal laws.

CJL1130 Criminal Evidence & Court Procedures  
Credit Hours: 3  
An examination of the rules governing admissibility of evidence, specifically as they affect the law enforcement officer in the processes of arrest, use of force, search and seizure, presentation and custody of evidence, testimony and court procedure.
CJL1140 Correctional Law  
Credit Hours: 3  
A course in practical law for correctional personnel. Study includes law regulating use of force, civil rights of prisoners, constitutional law, legal service, disciplinary procedures, parole and current case law.

CJL2060 Civil Rights  
Credit Hours: 3  
A survey course of the Federal Rights legislation to include the 13th through 15th Amendments of the Reconstruction Era and the Civil Rights legislation of the 60's. Special topics include consideration of the American Disabilities Act, Age Discrimination in Employment Act, Equal Employment Opportunities Act, Equal Pay Act, Affirmative Action, and Sexual Harassment.

CLP2140 Abnormal Psychology  
Credit Hours: 3  
This course concentrates on the explanation of psycho-logical abnormality including symptomatic patterns, causation, and treatment approaches of psychological disorders. This course discusses several types of psychological disturbances and maladaptive behaviors as well as the various diagnostic categories and criteria, terminology, and therapeutic approaches associated with each.

CNT3014 Enterprise System Integration  
Credit Hours: 3  
This course will demonstrate how to integrate Apple, Windows, UNIX, and Linux machines into one cohesive network using LDAP. Storing networking services data in a directory service will also be described. Also, there will be a discussion about using dynamic web languages and LDAP to integrate web applications into an enterprise system.

CNT3504 Networking  
Credit Hours: 3  
This course teaches the concepts necessary to design, deploy, integrate and administer a communications infrastructure. This course includes data communication concepts that cover telecommunications, the Internet and Internetworking principles.

CNT3604 System Administration & Maintenance  
Credit Hours: 3  
This course will provide the IT professional with the knowledge and the management tools that are needed to design, select, apply, and deploy computer systems. The learned outcomes will allow the student an understanding in system administration concepts that will cover software, hardware, system types, databases, communications documentation, internet, and maintenance.

CNT3702 Infrastructure & Facilities Planning  
Credit Hours: 3  
Students integrate computer and networking hardware and software into a robust, secure, redundant and resilient infrastructure. Students will research and present findings related to enterprise projects in computer networking design. In addition to the technical requirements the student will learn the business principles of economies of scale, service level agreements, request for proposals, and outsourcing.

CNT3721C Virtualization Concepts & Implementation  
Credit Hours: 3  
This course offers an in-depth look at virtualization concepts, with an overview of virtualization products. Students will learn to create, configure and manage various types of virtual machines.

CNT4422C Cloud Security (CCSP)  
Credit Hours: 3  
A CCSP applies information security expertise to a cloud-computing environment and demonstrates competence in cloud security architecture, design, operations, and service orchestration. This professional competence is measured against a globally recognized body of knowledge.

COM2053 Introduction to Speech Communication and Civic Engagement  
Credit Hours: 3  
This course is designed to help students utilize communication strategies such as interpersonal communication, small/large group communication, verbal/nonverbal communication, public communication, and civic engagement. Topics include: audience analysis, speech anxiety, critical listening, preparation and delivery of informative and persuasive public speeches in various cultural contexts with emphasis on academic and scholarly research. Students
will fundamental training and practical experience for researching, organizing, and delivering speeches in public situations. Additionally, students will recognize the need for civic engagement from one on one engagement to engagement across the vast spectrum of our rapidly changing global society.

**COM236 Computer Mediated Communication**  
**Credit Hours:** 3  
This course provides the beginning programming student with the techniques necessary to write well-documented, structured computer programs. The course is intended to emphasize the planning process using examples involving sequence, selection, and iteration. The course is designed to promote good programming practices for further study of other programming languages.

**COM2370 New Media Communication Applications I**  
**Credit Hours:** 3  
Course examines current trends and issues in new media communication while also equipping students with the skills necessary to use various digital applications for internal and external communication strategies and content-delivery. The course explores transformations inherent in the digital domain and the associated social and cultural ramifications for new media communication leadership/management.

**COM2371 New Media Communication Applications II**  
**Credit Hours:** 3  
Course examines and identifies various theories and best practices related to organizational and network communication solutions while also introducing students to appropriate transmedia platforms and strategies in view of the creation of digitally/new media-based branding messages.

**COM2372 New Media Communication for Business**  
**Credit Hours:** 3  
A theoretical and practical course designed to meet the needs of the business and professional community. Students will learn how organizations engage with the challenges that result from the emergence of new media communication technologies and platforms. The course introduces students to processes by which organizations develop their corporate strategies, business plans, marketing and production operations as they respond to radical changes in new media communication technology.

**COM2412 Communication Methods and Culture**  
**Credit Hours:** 3  
This course explores the fascinating relationship between communication and culture as well as the development of systems and methods of research of/for new media delivery. It focuses on how culture affects communication processes, allows students to develop their intercultural communication skills and increases students’ sensitivity to other cultures while teaching students introductory concepts related to communication research design, methods, data collection, and analysis.

**COM2941 New Media Communication Internship**  
**Credit Hours:** 3  
This course functions as the capstone for the AS in New Media Communication. Internship with appropriate business applying knowledge and skills related to new media communication.

**COP1000C Introduction to Computer Programming**  
**Credit Hours:** 3  
This course provides the beginning programming student with the techniques necessary to write well-documented, structured computer programs. The course is intended to emphasize the planning process using examples involving sequence, selection, and iteration. The course is designed to promote good programming practices for further study of other programming languages.

**COP1210C Programming I**  
**Credit Hours:** 3  
This course provides an introduction to the fundamental concepts, methodologies, and techniques associated with Object Oriented Programming. The course is intended to provide the novice programming student with the techniques needed to develop well-documented computer programs.

**COP1258C Secure Coding**  
**Credit Hours:** 3  
The ability to solve problems creatively using computational methods. This course is designed for students who are
not intent on becoming computer programmers, but are interested in understanding the principles that govern object-oriented programming and secure software development that tries to limit security vulnerabilities.

COP1334C Introduction to C++ Credit Hours: 3
This course provides an introduction to computer program design and development using the C++ language. A structured, multi-phase, program development process featuring a series of steps involving problem definition, top-down design, and formal program specification is stressed. The course is intended to provide the novice programming student with the techniques needed to develop well-documented, structured computer programs.

COP1702C Introduction to Database & MySQL Credit Hours: 3
This course gives students an introduction to MySQL. Students will learn the design and creation of Object-Oriented Databases (using MySQL). Topics will include storing, retrieving, updating and displaying data using MySQL from Oracle.

COP1702C Introduction to Database & MySQL Credit Hours: 3
This course gives students an introduction to MySQL. Students will learn the design and creation of Object-Oriented Databases (using MySQL). Topics will include storing, retrieving, updating and displaying data using MySQL from Oracle.

COP2071C SQL Fundamentals Credit Hours: 4
This course provides a basis for students to implement the core principles and tools of a relational database. This combination of knowledge and skills will allow students to create tables, manage data within those tables, and write SQL queries derived from data stored in relational databases. Practice will also be provided to thoroughly prepare students for the Oracle certification exam SQL Fundamentals 1Z0-061.

COP2251C Programming II Variable Credit Course (3-4 Credit Hours)
This course continues the study of Programming I. Topics will include classes, polymorphism, inheritance, streams, exception handling, dynamic memory allocation, and memory management. An introduction to data abstraction and data structures is also included.

COP2335C Intermediate C++ Programming Credit Hours: 3
This course continues the study of structured programming and the C++ language begun in COP1334C. Topics will include classes, polymorphism, inheritance, streams, templates, exception handling dynamic memory allocation, and memory management. An introduction to data abstraction and data structures is also included.

COP2360C C# Programming Credit Hours: 3
This course teaches students how to create C# programs and gives the student a solid foundation on building applications using an object-oriented /event-driven language. Students will write programs using C# controls and their main properties, methods and events. Students will also write programs that access sequential access files and will learn basic programming structures and manipulation of arrays in C#. The class assumes a working knowledge of basic programming control structures.

COP2361C Object-oriented Analysis & Design Credit Hours: 3
This course focuses on the object-oriented software development process, including object-oriented methodologies and workflows. Students will be able to determine the Use Cases and Domain Model of the problem domain. Create a system design supporting functional requirements. Create a system architecture supporting the nonfunctional requirements and development constraints.

COP2658C iPhone Application Development Credit Hours: 3
In this course, students will learn how to create mobile applications that can be deployed to iOS smartphones, tablets or simulators utilizing standard tools for development. Emphasis will be placed on learning the underlying iOS framework and components in order to create quality mobile applications.

COP2660C Android Application Development I Credit Hours: 3
This course teaches the principles of Android application development. Students will learn how to create mobile
applications for deployment to Android smartphones, tablets or simulators utilizing open source software (Java, Eclipse IDE, Android Plug-In and Android SDK) for deployment. Emphasis will be placed on the underlying Android Framework to create quality applications.

**COP2800C Programming in JAVA**  
Credit Hours: 3  
This course introduces students to the JAVA Programming Language. Upon successful completion of this course, the students should be able to create Java programs that leverage the object-oriented features of the Java language, such as encapsulation, inheritance and polymorphism; use data types, arrays and other data collections; implement error-handling techniques using exception handling, create an event-driven GUI using Swing components; and implement I/O functionality to read from and write to text files.

**COP2940 Web Programming Internship**  
Credit Hours: 3  
An Internship will provide the student with practical work experience in the field. In preparation, the student will produce a resume to present to potential employers. The student will work a minimum of 144 hours. Prerequisite: All students must contact the Co-operative Education Office to obtain registration approval.

**COP3125C Web Development I**  
Credit Hours: 3  
Organizations typically use many disparate technologies that need to communicate and work with each other. A key component to the discipline of information technology is the integration of applications and systems. This knowledge area examines the various types of programming languages and their appropriate use. It also addresses the use of scripting languages, architectures, application programming interfaces and programming practices to facilitate the management, integration and security of the systems that support an organization.

**COP3265C Web Development II**  
Credit Hours: 3  
This course provides students with a strong foundation in Web Programming and Front End Web Development.

**COP3560C Spatial Computing Foundations**  
Credit Hours: 3  
This course is designed to provide students with the conceptual foundation, technical basis, and software development skills to design and program digital content in spatial computing. Students will explore the differences between spatial computing and AR/VR, develop key design techniques, and engage in development and testing.

**COP3668C Unity Programming**  
Credit Hours: 3  
This course is designed to prepare students for the global expansive and evolving media and entertainment industry. Upon successful completion of this course, the students should gain knowledge/experience and develop the skills necessary to manage all aspects of game design process through interactive application and video game creation.

**COP4111C Intermediate Web Scripting**  
Credit Hours: 3  
This course covers intermediate client and server side scripting concepts. Students will learn how to incorporate HTML5 APIs, AJAX, XML and JSON in web sites as well as use popular client and server side scripting libraries and frameworks in web site development.

**COP4370C Web Development III**  
Credit Hours: 3  
This course introduces students to the database portion of a web application, and students will learn about Project and Product Management in web design.

**COP4450C Web Development IV**  
Credit Hours: 3  
This course covers Advanced Front End Web Development, and will dive deeper into the popular front end frameworks that shape the web today. Specific topics will be covered based on current web development need, as well as current trends in the job market.

**COP4850C Capstone**  
Credit Hours: 3  
This capstone course will provide the opportunity for the student to demonstrate that he/she has learned material
during the program and can apply it to a current issue. It should be taken during the student's last semester in the program. It provides the student with the opportunity to develop a plan to address one specific problem related to their specialization in detail.

**COP4850 Web Development Capstone**  
Credit Hours: 3  
This capstone course will provide the opportunity for the student to demonstrate that he/she has learned material during the program and can apply it to a current issue. It should be taken during the student's last semester in the program. It provides the student with the opportunity to develop a plan to address one specific problem related to their specialization in detail.

**COP4858 Integrative Programming & Technologies**  
Credit Hours: 3  
Organizations typically use many disparate technologies that need to communicate and work with each other. A key component to the discipline of information technology is the integration of applications and systems. This knowledge area examines the various types of programming languages and their appropriate use. It also addresses the use of scripting languages, architectures, application programming interfaces and programming practices to facilitate the management, integration and security of the systems that support an organization.

**COP4940 Internship**  
Credit Hours: 3  
An Internship will provide the student with practical work experience in the field. In preparation, the student will produce a resume to present to potential employers. The student will work a minimum of 144 hours. Prerequisite: All students must contact the Co-operative Education Office to obtain registration approval.

**CPO4565C Applications of Spatial Computing**  
Credit Hours: 3  
This course is designed for the student to apply his/her knowledge and skills applicable to Spatial Computing and Magic Leap hardware. The course is designed as project-based experiences focusing on Applications Development.

**CPO2002 Introduction to Comparative Government**  
Credit Hours: 3  
This course is a survey of political systems in the developed and the underdeveloped world. Democratic, non-Democratic, unitary and Federal systems will be analyzed and contrasted. Also, the European community will be examined as an example of multinational cooperation.

**CPO2140 Government & Politics of Spain**  
Credit Hours: 3  
An introduction to the understanding of Spain's govern-mental process, with emphasis on the structure of Spanish politics, the constitutional framework, the working of the bureaucracy, and the role of interest groups within the context of Spain's constitutional setting.

**CRW1001 Creative Writing I**  
Credit Hours: 3  
The course is structured toward producing literary fiction, poetry, dramatic forms, creative non-fiction and other original expression. Student writing will be the primary basis for critical discussion with emphasis on fundamental aspects of poetry, fiction, and/or drama, as illustrated in master writers' work and demonstrated in student work. Lectures, readings, craft analysis, discussions, exercises and workshops provide students with the opportunity to develop the craft of creative writing.

**CRW1100 Fiction Writing**  
Credit Hours: 3  
Lectures, readings, craft analysis, discussions, writing exercises, and workshops provide students with the opportunity to analyze fiction and practice the craft of writing fiction. The course is structured toward producing literary fiction. Student writing and master writers' works will be the primary basis for critical discussion, with an emphasis on the fundamental aspects of fiction.

**CRW1300 Poetry Writing**  
Credit Hours: 3  
The course is structured toward producing poetry. Student writing will be the primary basis for critical discussion with emphasis on fundamental aspects of poetry, as illustrated in master writers' work and demonstrated in student work. Lectures, readings, craft analysis, discussions, exercises and workshops provide students with the opportunity to develop the poetic creative writing craft.
CRW2002 Creative Writing Workshop II
A continuing development of creative writing ability. Credit Hours: 3

CRW2003 Advanced Creative Writing Workshop
A continuing development of creative writing ability. Students may work on independent writing projects. Directed independent study. Instructor's Approval. Credit Hours: 3

CRW2005 Advanced Creative Writing Workshop
A continuing development of creative writing ability. Students may work on independent writing projects. Directed independent study. Instructor's Approval. Credit Hours: 1

CTS1106C Unix
The UNIX Operating System Essentials course provides instruction in the key features and capabilities of the UNIX OS. Topics include file and directory management, controlling the user work environment, archiving files and using remote commands. In addition, this course explains fundamental command-line features of the UNIX OS, including file system navigation, the VI text editor, file permissions, access control lists (ACLs), command shells, file compression, basic network use, and reading shell scripts. This course prepares students to take the Sun Certified Solaris Associate (SCSAS) Exam. Credit Hours: 3

CTS1111C Linux+
This course provides students with the knowledge and skills necessary to effectively administer Linux workstations and servers. Students will plan, install, maintain, and troubleshoot Linux operating system services. The skills developed by students completing this course will help prepare them for the CompTIA Linux+ certification exam. Credit Hours: 4

CTS1133C A+ Comprehensive
This course provides students with the knowledge required to assemble components based on customer requirements, install, configure and maintain devices, PCs and software for end users, understand the basics of networking and security/forensics, properly and safely diagnose, resolve and document common hardware and software issues while applying troubleshooting skills. Successful candidates will also provide appropriate customer support; understand the basics of virtualization, desktop imaging, and deployment. Credit Hours: 4

CTS1134C Network+
This course provides students with important knowledge and skills required to implement a defined network architecture with basic network security to configure, maintain, and troubleshoot network devices using appropriate network tools, to understand the features and purpose of network technologies, and to make basic solution recommendations, analyze network traffic, and be familiar with common protocols and media types. Practice will also be provided to thoroughly prepare students for the Network+ certification exam offered by CompTIA. Credit Hours: 4

CTS1145C Cloud Essentials & Storage+
This course will provide students with the knowledge and understanding of the main cloud computing principles and concepts. Additionally, student will learn about the fundamentals of business continuity, application workload, system integration, and storage/system administration, while performing basic troubleshooting on connectivity issues and referencing documentation. Successful students in this class will be prepared to sit for the CompTIA Cloud Essentials and CompTIA Storage+ exams. Credit Hours: 3

CTS1212C Adobe Photoshop
This Adobe course teaches students how to fully utilize the latest Adobe Photoshop image editing tool to create and manipulate images. The course includes hands-on experiences with exercises and projects to provide students with a thorough working knowledge of Adobe Photoshop. In this course students learn to paint and retouch images, use layers, support video, work with vector tools, manage digital assets, work with RAW camera files, manage color, and prepare images for output to the web. The skills developed by students completing this course will help prepare them...
for the Adobe Certified Associate certification exam.

**CTS1214C Microsoft Project**  
Credit Hours: 2  
In this course, students will learn to manage project resources, task assignments and scheduling using Microsoft Project in support of workforce skills. They will also learn about the integration and tracking of multiple projects and programs.

**CTS1390C Installation, Storage, and Computer with Windows Server 2016**  
Credit Hours: 3  
This course focuses primarily on the installation, and compute features and functionality available in Windows Server 2016. It covers general installation tasks and considerations and the installation and configuration of Nano Server, in addition to the creation and management of images for deployment. It also covers local and server storage solutions, including the configuration of disks and volumes, Data Deduplication, High Availability, Disaster Recovery, Storage Spaces Direct, and Failover Clustering solutions. The also covers Hyper-V and containers, along with the maintenance and monitoring of servers in physical and compute environments. Practice will also be provided to thoroughly prepares students for the 70-740 certification exam offered by Microsoft.

**CTS1806C Intermediate Cascading Style Sheets**  
Credit Hours: 3  
This course teaches students how to use the Adobe Dreamweaver Integrated Development Environment. Students learn Project requirements, website usability, using rich media content, content control tools, website building techniques, collaboration and Site testing, and how to manage and maintain websites. Students will also use advanced CSS techniques to create sites to the latest W3C standards.

**CTS1808C Website Animation**  
Credit Hours: 3  
This course teaches students how to produce vector-based animations for the Web using various tools like Adobe Flash (which is the industry-standard software for developing interactive experiences on the Web, desktops, mobile devices, and tablets), and the HTML5 canvas tag combined with CSS and JavaScript.

**CTS1851C CIW Web Foundations**  
Credit Hours: 4  
This course is an entry-level course that provides students with baseline technical knowledge and skills of Internet, intranet, and extranet technologies. Students will gain a basic knowledge and/or competency of Internet skills and tasks in 3 core content areas: Internet Business Foundations, Site Development Foundations, and Network Technology Foundations. The skills developed by students completing this course will prepare them for the CIW Foundations certification exam.

**CTS1855C Web Authoring I**  
Credit Hours: 4  
This course is an entry-level course that provides students with baseline knowledge and skill in web page development. Students will code web pages using HTML and CSS, without the use of third-party software. This course will also introduce students to JavaScript.

**CTS1861C Web Authoring II**  
Credit Hours: 3  
This course teaches students the concepts of web development and how to apply structure and design skills using HTML and CSS. It will also introduce strategies and tactics necessary to design user interfaces, with emphasis on creating user interfaces for mobile devices. It focuses on teaching specific development techniques and strategies.

**CTS2120C Security+**  
Credit Hours: 4  
This course provides the student with an understanding of the computer, network, infrastructure, and information security issues faced by industry worldwide. Expertise necessary to combat and protect intellectual property from theft and destruction are also developed. The skills developed by students who complete this course will prepare them for
the Security+ certification exam.

**CTS2131C A+ Practical**  
Credit Hours: 3  
This course provides students with the skills required to install, configure, upgrade, and maintain PC workstations, the Windows OS and SOHO networks, in addition the student will be able to utilize trouble-shooting techniques and tools to effectively and efficiently resolve PC, OS, and network connectivity issues and implement security practices.

**CTS2148C Project+**  
Credit Hours: 3  
This course reviews the entire project life cycle, and thoroughly prepares students for the Project+ certification exam offered by CompTIA.

**CTS2156C Microsoft Enterprise Desktop Support**  
Credit Hours: 4  
This Microsoft IT Academy course teaches students the skills to support end users who run Microsoft Windows and applications that are included with the operating system, such as productivity applications used in a corporate environment and Microsoft Office applications. It provides students with the knowledge and skills needed to isolate, document and resolve problems on a Windows desktop or laptop computer and a working knowledge of operating in an Active Directory domain environment. The course includes the skills needed to resolve operating system issues by telephone, email, connecting to an end user's system remotely, or by visiting an end user's desktop.

**CTS2314C Network Defense & Countermeasures**  
Credit Hours: 3  
Students will take an in depth look at network defense concepts and techniques. They will examine theoretical concepts that make the world of networking unique. Along with examining different network defense strategies, this course will explore the advancement of network implementation, as well as, timeless problem solving strategies. The course also covers developing and implementing a security policy.

**CTS2375C Cloud+**  
Credit Hours: 3  
This course will provide students with the knowledge and skills required to understand standard Cloud terminologies/methodologies, to implement, maintain, and deliver cloud technologies and infrastructures (e.g. server, network, storage, and virtualization technologies), and to understand aspects of IT security and use of industry best practices related to cloud implementations and the application of virtualization. Successful students in this class will be prepared to sit for the CompTIA Cloud+ exam.

**CTS2376C Managing MS Office 365**  
Credit Hours: 3  
This course will prepare IT professionals for evaluating, planning, deploying, and operating the Office 365 services, including its dependencies, requirements, and supporting technologies. Practice will also be provided to thoroughly prepare students for the Microsoft Office 365 1 certification exam.

**CTS2377C Enabling Office 365**  
Credit Hours: 4  
This is the second course that will prepare students to take part in evaluating, planning, deploying, and operating Office 365 services, including its identities, dependencies, requirements, and supporting technologies. This course focuses on skills required to set up an Office 365 tenant, including federation with existing user identities, and skills required to sustain an Office 365 tenant and its users. Practice will also be provided to thoroughly prepare students for the Microsoft MCSA certification exam Analyzing with Power BI 70-347.

**CTS2383C Managing a Server Network Operating System**  
Credit Hours: 3  
This course provides students with the knowledge and skills necessary to install and configure a network server and perform post-installation and day-to-day administrative tasks. The course gives the student the background needed to provide technical support for network servers. This course is taught using a network operating dictated by industry conditions. When taught using the Windows 2008 platform this course will assist the student in preparing for the related Microsoft certification examination.

**CTS2391C NETWORKING WITH WINDOWS SERVER 2016**  
Credit Hours: 3  
This course will give students the skills to maintain a Windows Server 2012 infrastructure, such as user and group
management, network access and data security.

CTS2393C Designing & Implementing a Server Infrastructure  Credit Hours: 3
This course will give students the skills and knowledge necessary to design, implement and maintain a Windows Server 2012 Infrastructure in an enterprise scaled, highly virtualized environment.

CTS2394C Implementing Advanced Server 2012 Infrastructure  Credit Hours: 3
This course will give students the skills and knowledge necessary for planning, designing and deploying a Windows Server 2012 highly virtualized infrastructure including the Active Directory, storage, security and networking services.

CTS2395C Implementing a Desktop Infrastructure  Credit Hours: 3
This course will give students the skills and knowledge necessary to plan, configure, and implement of the Windows Server 2012 desktop services, such as desktop imaging and deployment application / desktop virtualization, and RDP access and infrastructure.

CTS2396C Implementing Desktop Application Environments  Credit Hours: 3
This course will give students the skills and knowledge necessary to plan, configure, and implement of the Windows Server 2012 desktop services, such as desktop imaging and deployment, application / desktop virtualization, and RDP access and infrastructure.

CTS2420C Microsoft: .NET Foundations  Credit Hours: 3
In this advanced course, students with previous Windows Forms development experience gain more advanced Windows Client design and development skills. WinForms and WPF programming models, as well as relative strengths and when to use each technology, are covered.

CTS2434C Microsoft SQL Server Developer I  Credit Hours: 3
This course teaches students how to implement a Reporting Services solution in an organization. The course discusses how to use the Reporting Services development tools to create reports, and how to use the Reporting Services management and administrative tools to manage a Reporting Services solution.

CTS2437C Microsoft SQL Server Database Administration I  Credit Hours: 4
This course provides students with the knowledge and skills to maintain a Microsoft SQL Server database. The course focuses on teaching individuals how to use SQL Server product features and tools related to maintaining a database.

CTS2438C Microsoft SQL Server Database Administration II  Credit Hours: 4
This course provides students with the knowledge and skills to design, optimize, and maintain a database administrative solution for Microsoft SQL Server.

CTS2445C Oracle Developer  Credit Hours: 3
This course starts with an introduction to PL/SQL and proceeds to list the benefits of this powerful programming language. Students are made aware of how to create PL/SQL blocks of application code that can be shared by multiple forms, reports, and data management applications. In addition, creation of anonymous PL/SQL blocks as well as stored procedures and functions are covered in this course. Students enhance their developer skills by learning to develop, execute, and manage PL/SQL stored program units such as procedures, functions, packages, and database triggers. Understanding the basic functionality of how to debug functions and procedures using the SQL Developer Debugger gives way to refined lines of code. Students also learn to manage PL/SQL subprograms, triggers, declaring identifiers, and trapping exceptions. The utilization of some of the Oracle-supplied packages is also in the course. Additionally, students learn to use Dynamic SQL, understand design considerations when coding using PL/SQL, understand and influence the PL/SQL compiler, and manage dependencies. This course is designed to prepare students for the corresponding Oracle PL/SQL Developer Certification exam.

CTS2446C Oracle Developer II  Credit Hours: 3
Oracle Forms Developer is used to build high performance applications for the Internet. Forms Developer is a web based application development tool that helps in quickly constructing database forms and business logic with minimal of effort. In this course students build, test, debug, and deploy interactive Internet applications. Working in a graphical user interface (GUI) environment, they develop an order entry application from the ground up. This application incorporates several advanced features that provide a rich user experience while implementing business rules. This course is designed to prepare students for the corresponding Oracle Forms Developer Certified Professional Certification.

**CTS2451C Microsoft SQL Server Developer II**
Credit Hours: 3
This course provides in-depth knowledge on designing a Business Intelligence solution by using Microsoft SQL Server. The course will cover design and management of reports, data mining models, administering a BI solution, designing the BI architecture, designing and deploying SSIS packages, and designing an analysis services database.

**CTS2464C SUN: Advanced Java Programming**
Credit Hours: 3
This course is designed to prepare students for the Oracle Certified Programmer for Java certification. Upon successful completion of this course, the students should be proficient in creating event-driven GUIs using Swing components, creating multi-threaded programs and creating simple Transmission Control Protocol/Internet Protocol (TCP/IP) networked client that communicates through a server through sockets.

**CTS2651C Router Technology**
Credit Hours: 3
This course is designed to prepare a student to apply and understand the basics of networking concepts, and using networking hardware. The course covers network devices, router and IOS basics, router startup and configuration, routing and advanced routing protocols, basic switching configuration, and advanced switching concepts. Students are first introduced to theory-based concepts, which are followed-up with practical hands-on labs.

**CTS2652C Advanced Router Technology**
Credit Hours: 3
This course is designed to prepare a student to apply and understand the advanced principles and applications of networking hardware. The course covers advanced router configurations; LAN switching; network management; and advanced network design. This course will help prepare students for the Cisco Certified Networking Associate (CCNA) examination.

**CTS2852C Client-side Scripting**
Credit Hours: 4
This course will help students understand and utilize Server Side Scripting technology. Students will work with Server Side Scripting to create Internet-based applications. Students will learn to connect to databases, work with files, extract data from HTML forms, and how to build secure applications.

**CTS3128C CISSP**
Credit Hours: 4

**CTS3360C Microsoft System Center Configuration Manager**
Credit Hours: 3
This course provides students with the knowledge and skills to deploy and manage software and assets using the Microsoft System Center Configuration Manager. The skills developed by students completing this course will help prepare them for the Microsoft System Center Configuration Manager.

**CTS3392C Identity with Windows Server 2016**
Credit Hours: 3
This course focuses on the identity functionality in Windows Server 2016. It covers the installation and configuration of Active Directory Domain (AD DS), in addition to Group Policy implementation for non-Nano Server environments.

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It also covers functionality such as Active Directory Certificate Services (AD CS), Active Directory Federations Services (AD FS), and Web Application proxy implementations. Practice will also be provided to thoroughly prepares students for the 70-742 exam offered by Microsoft.

**CTS3393C Designing & Implementing a Server Infrastructure**  
Credit Hours: 3  
This course will give students the skills and knowledge necessary to design, implement and maintain a Windows Server 2012 Infrastructure in an enterprise scaled, highly virtualized environment.

**CTS3394C Implementing Advanced Server 2012 Infrastructure**  
Credit Hours: 3  
This course will give students the skills and knowledge necessary for planning, designing and deploying a Windows Server 2012 highly virtualized infrastructure including the Active Directory, storage, security and networking services.

**CTS3660C CISCO CCNP Routing**  
Credit Hours: 3  
This course provides students with the knowledge and skills necessary to use advanced IP addressing and routing in implementing scalable and secure Cisco ISR routers connected to LANs and WANs. The skills developed by students completing this course will help prepare them for the Cisco Route Exam.

**CTS3857C Server-side Scripting**  
Credit Hours: 4  
This course will help students understand and utilize Server Side Scripting technology. Students will work with Server Side Scripting to create Internet-based applications. Students will learn to connect to databases, work with files, extract data from HTML forms, and how to build secure applications.

**CTS3859C CIW E-commerce Specialist**  
Credit Hours: 4  
This is a comprehensive course teaching students how to conduct business online and manage the technical issues associated with constructing an e-commerce Web site. Topics include designing and implementing commerce-driven Web sites; identifying the similarities and differences between traditional and electronic commerce, exploring e-commerce technologies at various levels of sophistication, and construction of a fully functional e-commerce web site using skills taught in this and previous classes. This course helps prepare students for the CIW E-Commerce Strategies and Practices certification exam.

**CTS4338C Microsoft Exchange Server**  
Credit Hours: 4  
This course will provide students with the knowledge and skills to install, configure, route and manage a Microsoft Exchange environment. They will also learn how to provide client access, backup and restore databases, and manage recipient objects such as mailboxes, distribution groups, and contacts. Practice will also be provided to thoroughly prepare students for the Microsoft Exchange certification exam offered by Microsoft.

**CTS4375C Advanced Cloud Infrastructure & Services**  
Credit Hours: 3  
The Cloud Infrastructure and Services course educates students about cloud deployment and service models, cloud infrastructure, and the key considerations in migrating to cloud computing. For all definitions of cloud computing, the course has resorted to the U.S. National Institute of Standards and Technology as a guide. The course covers technologies required to build classic (traditional), virtualized, and cloud data center environments. These technologies include compute, storage, networking, desktop and application virtualization.

**CTS4348C Linux System Administrator**  
Credit Hours: 3  
This course is designed to give students a working knowledge of Linux in an enterprise environment. Topics include common commands, users and groups, essential network services, storage, and virtualization. Practice will also be provided to thoroughly prepare students for the Linux Foundation Certified System Administrator (LFCS) certification exam offered by The Linux Foundation.

**CTS4395C Implementing a Desktop Infrastructure**  
Credit Hours: 3  
This course will give students the skills and knowledge necessary to plan, configure, and implement of the Windows Server 2012 desktop services, such as desktop imaging and deployment application / desktop virtualization, and RDP
access and infrastructure.

**CTS4396C Implementing Desktop Application Environments**  
Credit Hours: 3  
This course will give students the skills and knowledge necessary to plan, configure, and implement of the Windows Server 2012 desktop services, such as desktop imaging and deployment, application / desktop virtualization, and RDP access and infrastructure.

**CTS4627C CISCO CCNP Switching**  
Credit Hours: 3  
This course provides students with knowledge and skills necessary to plan, configure and verify the implementation of complex enterprise switching solutions using Cisco's Campus Enterprise Architecture. The skills developed by students completing this course will help prepare them for the Cisco Switch Exam.

**CTS4628C CISCO CCNP Troubleshooting**  
Credit Hours: 3  
This course provides students with the knowledge and skills necessary to plan and perform regular maintenance on complex enterprise routed and switched networks and to use technology-based practices and a systematic ITIL-compliant approach to perform network troubleshooting. The skills developed by students completing this course will help prepare them for the Cisco Troubleshoot Exam.

**CVT1200 Cardiopulmonary Pharmacology**  
Credit Hours: 3  
This course provides an overview of drugs related to the cardiopulmonary system with special emphasis on the drugs used to treat cardiac and pulmonary patients.

**DAA1100 Beginning Modern Dance I**  
Credit Hours: 2  
Basic modern dance technique, exercises, and choreography are used to achieve physical objectives, to increase artistic self-awareness and to extend cultural enrichment.

**DAA1101 Modern Dance II**  
Credit Hours: 2  
A continuation of DAA1104. Further development of modern dance techniques with an emphasis on vocabulary, alignment, movement phrasing, and rhythm. Participation in semester dance concert required.

**DAA1501 Jazz Dance II**  
Credit Hours: 2  
A course in jazz technique with emphasis on various jazz styles and performance. Includes warm-up, stretch and strengthening, centre exercises, and intermediate level jazz dance combinations.

**DAA1504 Jazz Dance I**  
Credit Hours: 2  
This is a course in Jazz technique. Included are warm-up, stretch and strengthening, centre exercises, and basic jazz combinations.

**DAA1680 Dance Repertory**  
Credit Hours: 1  
Participation as a dancer/performer in dance works of ballet, jazz, and modern vocabularies. Works include those of dance faculty, guest artists, as well as student choreography.

**DAA2102 Modern Dance III**  
Credit Hours: 2  
A continuation of DAA1105 with an emphasis on advanced movement phrases and combinations necessary to perform modern dance repertory. Further emphasis will be placed on the development of the students' style and performance quality.

**DAA2220 Pointe I**  
Variable Credit Course (1-4 Credit Hours)  
This course is an introduction to the theory and practice of pointe work for the ballet class. Students will learn the history and structure of pointe shoes, proper fit and maintenance, and will develop strength, coordination and movement quality through exercises and performance.
DAA2280 Ballet I  
Credit Hours: 2
An academic study of techniques and theoretical concepts of ballet for the performance-oriented student. Includes warm-up, barre, and centre combinations.

DAA2281 Ballet II  
Credit Hours: 2
Continuation of DAA1204. Ballet exercises and step combinations for the intermediate performance student, building on basic skills and culminating in a live performance.

DAA2282 Ballet III  
Credit Hours: 2
Continuation of DAA1205. Emphasis on developing strength and coordination in more complex phrasing and movement. This course will explore and develop an understanding of the vocabulary, technique, and theoretical concepts of ballet on an intermediate level.

DAA2610 Dance Composition  
Credit Hours: 2
This course is designed to introduce the student to the creative process of dance composition. Through the use of compositional structures and choreographic devices, the student will create movement studies. Improvisation, aesthetic principles and elements of dance will be examined.

DAA2930 Special Topics in Dance  
Variable Credit Course (1-2 Credit Hours)
An instructional course concerned with activity and development of dance movement skills and concepts centered around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Special Topics credit hours are not automatically transferable. Transfer credit is the prerogative of the receiving institution. Coeducational. May be repeated for credit (up to 6 credits).

DAA2905 Independent Study  
Credit Hours: 3
Individual dance study under the direction of a faculty member. Topics may vary and are usually selected on an individual basis. This course is variable in credit and is repeatable for credit. Pre-requisite: instructor approval.

DAN2100 Dance Appreciation  
Credit Hours: 3
Dance Appreciation is an introductory survey class that examines dance as a primary mode of human expression and communication. This course introduces dance as an art form and will enhance knowledge of the historical, cultural and aesthetic aspects of dance via the study of its origins in ritual, courtly, social and theatrical settings. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

DAN2600 Music for Dance  
Credit Hours: 2
Designed to provide both the dancer and choreographer with the musical knowledge and tools to enhance how they use music in their discipline and how they communicate their musical needs to musicians.

DEA0000 Introduction to Dentistry  
Credit Hours: 1
An overview of dentistry and the dental assisting profession including its history, ethical and legal aspects, duties and responsibilities of the dental health team, professional organizations, and proper conduct and grooming of the dental
assistant. Two-hour lecture per week.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEA0025 Pre-Clinical</td>
<td>Designed to orient the student to the dental office and the use and sterilization of all instruments and equipment used in the practice of dentistry.</td>
<td>2</td>
</tr>
<tr>
<td>DEA0130 Allied Dental Theory</td>
<td>Designed to acquaint the student with basic body structures, functions and diseases which affect dental treatment. Basic concepts of microbiology and their relevance to sterilization. General aspects of oral pathology, including common pathological conditions of the mouth, teeth, and their supporting structures will be covered. Additional consideration will be given to the pharmacological properties, therapeutic applications and any toxicities or contraindications of drugs and medicaments commonly used in dentistry. Essential material on the symptoms, treatment, and equipment required to render adequate care for the common office emergencies will be included.</td>
<td>1</td>
</tr>
<tr>
<td>DEA1000 Introduction to Dental Practice/Assisting</td>
<td>An overview of dentistry and the dental assisting profession including its history, ethical and legal aspects, duties and responsibilities of the dental health team, professional organizations, and proper conduct and grooming of the dental assistant.</td>
<td>3</td>
</tr>
<tr>
<td>DEA1030 Pre-Clinical</td>
<td>Designed to orient the student to the dental office and the use and sterilization of all instruments and equipment used in the practice of dentistry.</td>
<td>4</td>
</tr>
<tr>
<td>DEA1030L Preclinical Laboratory</td>
<td>Laboratory/clinical portion of DEA1030. Provides hands-on instruction of use and sterilization of all instruments and equipment used in the practice of dentistry.</td>
<td>2</td>
</tr>
<tr>
<td>DEA1131 Allied Dental Theory</td>
<td>Designed to acquaint the student with basic body structures, functions and diseases which affect dental treatment. Basic concepts of microbiology and their relevance to sterilization. General aspects of oral pathology, including common pathological conditions of the mouth, teeth, and their supporting structures will be covered. Additional consideration will be given to the pharmacological properties, therapeutic applications and any toxicities or contraindications of drugs and medicaments commonly used in dentistry. Essential material on the symptoms, treatment, and equipment required to render adequate care for the common office emergencies will be included.</td>
<td>2</td>
</tr>
<tr>
<td>DEA1155 Dental Psychology</td>
<td>This course will offer material on the basic theories of psychology which enable the dental assistant to possess a greater understanding of why people act as they do. Included in the course are practical techniques for effective patient management and basic guidelines for establishing a better interpersonal relationship between the dental assistant, dental staff and the dental patient.</td>
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</tr>
<tr>
<td>DEA1936 Dental Seminar</td>
<td>Seminar format of student clinical experiences and lecture series focusing on selected dental topics pertaining to effective dental assisting and the additional duties permitted by rules and regulations of the Florida State Board of Dentistry.</td>
<td>1</td>
</tr>
<tr>
<td>DEA1940L Clinical Practice I</td>
<td>This course provides practical application in a clinical setting of knowledge acquired in the classroom. This course allows the dental assistant student the opportunity to demonstrate their clinical and administrative skills in a dental office setting. This is a non-paid externship where the student will be expected to perform as if they were on the job. The student may be rotated to different offices during this externship to benefit from additional experiences. The student will be learning under the supervision of a licensed dentist, and an externship coordinator from BC will come and observe and check-in with the student on a regular basis. Students are expected to keep track of their hours and</td>
<td>2</td>
</tr>
</tbody>
</table>
keep a journal which they will turn into the dental assisting lead instructor.

**DEA1941L Clinical Practice II**  
**Credit Hours: 3**  
This course allows the dental assistant student the opportunity to continue to demonstrate their clinical and administrative skills in a dental office setting. This is a non-paid externship where the student will be expected to perform as if they were on the job. The student may be rotated to different offices during this externship to benefit from additional experiences. The student will be learning under the supervision of a licensed dentist, and an externship coordinator from BC will come and observe and check-in with the student on a regular basis. Students are expected to keep track of their hours and keep a journal which they will turn in to the dental assisting lead instructor. Students must have completed all Dental Assisting coursework prior to enrolling in this course.

**DEH1002 Clinical Dental Hygiene Procedures**  
**Credit Hours: 2**  
A course designed to provide knowledge of the principles of dental hygiene with a detailed study of instrumentation. The course includes data collection and mastery of beginning techniques in dental care.

**DEH1002L Preclinical Dental Hygiene Laboratory**  
**Credit Hours: 2**  
The laboratory portion of this course is designed to provide hands-on instruction in the application of dental hygiene procedures with a detailed study of instrumentation. The course includes data collection and mastery of beginning techniques in dental patient care.

**DEH1130 Oral Histology & Embryology**  
**Credit Hours: 2**  
This course studies the embryonic development and the histology of the components of the oral cavity. This includes a comprehensive study of the cells and tissues of the oral cavity.

**DEH1602 Periodontology**  
**Credit Hours: 3**  
This course presents the etiology and classification of periodontal disease and principles of periodontal pertinent to dental hygiene practice. Principles of occlusion and periodontal surgery techniques are discussed through the use of case presentations.

**DEH1602L Periodontology Laboratory**  
**Credit Hours: 1**  
Encompasses a continuation of learning current periodontal trends in the dental office. This laboratory provides the student with hands on activities to insure effective patient treatment including phase microscopy, ultrasonic instrumentation, desensitizing agents, Soft Tissue Management, chemotherapeutic agents, advanced perio assessment, therapy and treatment procedures.

**DEH1800 Dental Hygiene I**  
**Credit Hours: 2**  
This course provides instruction on removal of hard and soft deposits, treatment planning, preventive procedures, care of instruments, pre and post-operative procedures, and dental hygiene diagnosis.

**DEH1800L Dental Hygiene I Clinic**  
**Credit Hours: 2**  
This course will provide clinical experience in comprehensive patient care. Emphasis is placed on treatment planning and dental hygiene assessment techniques.

**DEH1802 Dental Hygiene II**  
**Credit Hours: 3**  
A course designed to provide further knowledge in the application of dental hygiene procedures. This includes information on treatment planning, periodontal charting, ultrasonic scaling and comprehensive dental hygiene care.

**DEH1802L Dental Hygiene II Clinic**  
**Credit Hours: 4**  
This course will provide clinical experience in treatment planning, periodontal charting, ultrasonic scaling and comprehensive dental hygiene care.
DEH1934 Dental Hygiene Review Seminar
Dental hygiene course centering around national board of dental hygiene examination review.

Credit Hours: 1
DEH2300 Dental Pharmacology
This course provides an understanding of the drugs commonly encountered in the dental office. The student will gain knowledge in the origin, physical and chemical properties, modes of administration and effects upon the body system.

DEH2400 General & Oral Pathology
This course provides principles of general and oral and pathology as it relates to diseases of the oral cavity. There will be emphasis on the importance of the dental hygienist's recognition of normal and abnormal conditions.

DEH2701 Community Dental Health
This course will teach the student the concepts of community dental health. Topics covered include the measurement of dental disease, prevention programs, community outreach programs, and simple statistical analysis.

DEH2701L Community Dental Health Laboratory
This course is the follow through for DEH2701. The student will apply community health principles by designing and presenting dental health education principles to various community audiences.

DEH2804 Dental Hygiene III
This six-week course provides opportunity for discussion and debriefing of clinical activities in DEH2804L. Instructions will be provided for application of difficult prophylactic procedures and advanced techniques. Treatment considerations for medically-compromised patients and case documentation projects will be studied. Advanced clinical techniques for assessment and patient management are included.

DEH2804L Dental Hygiene III Clinic
The laboratory portion of this course provides advanced application of the principles of preventive dental hygiene and oral prophylaxis techniques on patients in the clinic under supervision.

DEH2806 Dental Hygiene IV
This course provides continuation of theoretical material related to clinical dental hygiene practice. Discussions include advanced periodontal therapy with emphasis on synthesis or case information, recognition of advanced disease states and treatment regimens including the medically compromised. (Credit Hour change from 2 credits to 1 credit in Spring 20193).

DEH2806L Dental Hygiene IV Clinic
Continuation of clinical experience with patients, developing previously learned skills and knowledge. Emphasis placed on advanced instrumentation and patient management skills necessary to treat more difficult patients.

DEH2840L Advanced Dental Technology Laboratory
This laboratory course is designed to provide the dental hygiene students with basic concepts of computer technology and dental software used in the current practice of dentistry. The course will focus on advanced technologies which include dental software programs, intraoral camera, microscope, digital radiography, clinical assessments and practice management. Dental hygiene students will get hands on opportunities all soft-ware programs assuring their future success.

DEP2002 Developmental Psychology I: Child Psychology
This course is an overview of theories, concepts, and principles governing child development. The course spans from prenatal development to middle/late childhood up to age 12. Topics include issues of heredity, physical, cognitive, and social-emotional processes of development. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

DEP2004 Developmental Psychology
This is a developmental psychology course that considers human growth from conception to death. This course covers the physical, cognitive, and psycho-social process of human development. It is designed to give a general overview
of the developmental processes. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**DEP2302 Developmental Psychology II: Adolescent & Young Adult**

Credit Hours: 3  
The personal, social and developmental aspects of adolescence and early adulthood are reviewed in this course. A focus is placed upon the research dealing with the characteristic problems and adjustments of this life stage. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**DES0021 Dental Anatomy & Physiology**

Credit Hours: 1  
The study of head and neck anatomy with emphasis placed on the structure, morphology, and function of the primary and permanent human dentitions.

**DES0103 Dental Materials**

Credit Hours: 1  
Designed to familiarize the student with the various types of materials, their physical properties and characteristics, proper manipulation and designed application in the practice of dentistry.

**DES0103L Dental Materials Laboratory**

Credit Hours: 1  
Laboratory portion of DES0100. Proper manipulation and designed application in the practice of dentistry. Projects demonstrating proficiency in the technical applications and proper manipulation of specified dental materials will be required.

**DES0400 Basic Anatomy & Physiology**

Credit Hours: 1  
A basic anatomy and physiology course designed specifically to meet the needs of dental assisting students. Emphasis will be placed on the human body structure, functions of its components and associated diseases which affect the total care of the dental patient.

**DES0501 Dental Office Management**

Credit Hours: 1  
The study of efficient dental office management. Basic concepts to be presented will include telephone etiquette and communication. Guidelines for better interpersonal relations, methods for effective appointment control, dental bookkeeping systems and practices, business writing techniques, collection and billing, filing of patients records and procedures for tax and health insurance forms. Computer proficiency must be demonstrated by the student for course completion.

**DES0801 Clinical Procedures I**

Credit Hours: 1  
Lecture series acquaints the student with the necessary background material and assisting procedures involved in each dental specialty.

**DES0802 Clinical Procedures II**

Credit Hours: 1  
Practicum phase is a continuation of DES0801 with the addition of a supervised externship program utilizing dental offices and public health facilities in the community. Lecture demonstration series focuses on selected dental topics pertaining to effective dental assisting and the additional duties permitted by rules and regulations of the Florida State Board of Dentistry.

**DES0830 Expanded Functions I**

Credit Hours: 2  
The course is designed to provide the basic knowledge and clinical practice necessary for the dental assisting student to perform the expanded functions permitted by the rules and regulations of the Florida State Board of Dentistry.

**DES0831 Expanded Functions II**

Credit Hours: 1  
The course is designed to be a continuation of dental auxiliary expanded functions I. It will provide the basic knowledge necessary to perform the more complex expanded functions permitted by the rules and regulations of Florida State Board of Dentistry.
Emphasis is placed on the development of a plaque control program to meet individual patient needs. Materials on
methods of tooth brushing, supplementary aids for oral physiotherapy and the use of fluorides, and nutritional counseling in preventive dentistry will be presented.

**DES1020 Dental Anatomy & Physiology**
Credit Hours: 3
The study of head and neck anatomy with emphasis placed on the structure, morphology, and function of the primary and permanent human dentition.

**DES1054 Pain Control & Dental Anesthesia**
Credit Hours: 2
This course provides a study of agents used in dentistry for local anesthesia and pain control.

**DES1100 Dental Materials**
Credit Hours: 2
Designed to familiarize the student with the various types of materials, their physical properties and characteristics, proper manipulation and designed application in the practice of dentistry.

**DES1100L Dental Materials Laboratory (ATD)**
Credit Hours: 1
Laboratory portion of DES1100. Proper manipulation and designed application in the practice of dentistry. Projects demonstrating proficiency in the technical applications and proper manipulation of specified dental materials will be required.

**DES1200 Dental Radiography**
Credit Hours: 3
Fundamentals of radiological science as applied to dentistry will be presented. Special consideration will be given to radiation physics, hazards, biological effects, protection, and control methods. Also, proper techniques for exposing, processing and mounting of radiographs are included.

**DES1200L Dental Radiography Laboratory**
Credit Hours: 1
Laboratory portion of DES1200. Proper techniques for exposing, processing, and mounting radiographs. Laboratory exercise demonstrating proficiency in these techniques will be required.

**DES1404 Basic Anatomy & Physiology**
Credit Hours: 2
A basic anatomy and physiology course designed specifically to meet the needs of dental assisting students. Emphasis will be placed on the human body structure, functions of its components and associated diseases which affect the total care of the dental patient.

**DES1502 Dental Office Management**
Credit Hours: 2
The study of efficient dental office management. Basic concepts to be presented will include telephone etiquette and communication. Guidelines for better interpersonal relations, methods for effective appointment control, dental bookkeeping systems and practices, business writing techniques, collection and billing, filing of patients records and procedures for tax and health insurance forms. Computer proficiency must be demonstrated by the student for course completion.

**DES1805 Clinical Procedures I**
Credit Hours: 2
Lecture series acquaints the student with the necessary background material and assisting procedures involved in each dental specialty.

**DES1805L Clinical Procedures I Laboratory**
Credit Hours: 3
Practicum phase provides the opportunity for each student to receive closely supervised individual instruction in all phases of chairside assisting. Special fee charged.

**DES1832 Expanded Functions I**
Credit Hours: 1
The course is designed to provide the basic knowledge and clinical practice necessary for the dental assisting student to perform the expanded functions permitted by the rules and regulations of the Florida State Board of Dentistry.

**DES1832L Expanded Function I Laboratory**
Credit Hours: 1
Designed to provide the basic knowledge and clinical practice necessary for the Dental Assisting student to perform the Expanded Functions permitted by the Rules and Regulations of the Florida State Board of Dentistry.
### DES1833 Expanded Functions II  
**Credit Hours:** 2  
The course is designed to be a continuation of dental auxiliary expanded functions I. It will provide the basic knowledge necessary to perform the more complex expanded functions permitted by the rules and regulations of Florida State Board of Dentistry.

### DES1833L Expanded Function II Laboratory  
**Credit Hours:** 1  
This course is designed to be a continuation of dental auxiliary expanded functions I. It will provide the clinical practice necessary to perform the more complex expanded functions permitted by the rules and regulations of Florida State Board of Dentistry.

### DES1840C Preventive Dentistry  
**Credit Hours:** 2  
Emphasis is placed on the development of a plaque control program to meet individual patient needs. Materials on methods of toothbrushing, supplementary aids for oral physiotherapy and the use of fluorides, and nutritional counseling in preventive dentistry will be presented.

### DIG2100C Web Development I  
**Credit Hours:** 3  
The student will learn the basics of using Browsers to view web sites, create a web site and will progress through the processes of analysis, design, development, and implementation of complete web sites using HTML, XHTML, XML language with text editors. This course includes Web Programming with HTML, XHTML, XML, with emphasis on CSS on layout and structure of websites, hyperlinks, multimedia, forms, tables, testing, maintenance and uploading web sites to servers applying good web design and web site usability.

### DIG2101C Web Development 2 Using Dreamweaver  
**Credit Hours:** 3  
This course uses Adobe Dreamweaver software to create websites importing Flash and video movies and different disciplinary content. Students will explore the pre-production, layout, structure, and Internet Services Provider (ISP) of websites. Students will test and debug their websites from your host ISP. Students should have complete knowledge of graphics and XHTML.

### DIG2109C Digital Publishing with InDesign  
**Credit Hours:** 3  
This course is designed to teach desktop publishing using Adobe InDesign with emphasis on typography and desktop publishing techniques. Student will learn to layout and design documents with visual impact. Effective use of graphics, color, print separations, export to PDF, and preflight topics as they are used with desktop publishing are covered.

### DIG2115C Digital Imaging Fundamentals Using Photoshop  
**Credit Hours:** 3  
This course uses Adobe Photoshop software to create images for digital media applications. Students will learn how to create, edit, and manipulate graphics. Color theory, resolution, special effects, output, and design will be covered.

### DIG2116C Digital Imaging Advanced  
**Credit Hours:** 3  
The student will learn the advanced image processing techniques to prepare images for various output venues for web and multimedia. Multimedia and web developers use sophisticated graphic software (Fireworks and Photoshop or other similar software) to create interactive and stunning visuals that are easily integrated into dynamic multimedia and web pages. Students will learn how to create graphics with vector and bitmap images, apply special effects, build buttons, rollovers, animated gifs, image maps, compare graphic formats, optimize web graphics & palettes. Projects focus on resolution, color management including palettes and bit depth, optimization, image and texture creation, alpha channels for compositing, and special effects. Industry standard software will be used including Photoshop and Fireworks.

### DIG2132C Digital Art & Design with Illustrator  
**Credit Hours:** 3  
This course provides a sound theoretical introduction to the concepts, principles, and techniques of digital art and design. Explores the use of the computer as an art production and drawing tool using drawing and illustration software suchas Adobe Illustrator to create and generate visuals.
DIG2280C Digital Video/Audio Editing  
This course is an introduction to video/audio production for digital media/multimedia. Students will gain an in-depth knowledge and skills needed for video production to include hands-on experience in videography and video/audio editing for the creation of video/audio projects to include but not limited to documentaries/music videos/storytelling and commercials/public service announcements. Software used: The Adobe Production Suite including Premiere Pro, Sound Booth, Audition and Encore.

DIG2292C Digital Post Production with After Effects  
Credit Hours: 3  
This course focuses on digital post-production used for film, animation, video, digital media, and the web. Using Adobe After Effects students integrate both technical and aesthetic, 2-D graphics, 3-D models and animations, and background elements in projects. Students will become familiar with match-moving and compositing techniques.

DIG2302C 3D Animation 1  
Credit Hours: 3  
This course covers 3-D modeling, mapping, and rendering. Students will also learn techniques used in moving images and simulations as well as applying lighting and materials to 3-D objects.

DIG2303C 3D Animation 2  
Credit Hours: 3  
Continuation of DIG2302C with more animation and modeling techniques. Development of complex 3-D models such as aircraft, cars, & boats. Learn virtual film-making with Maya 3-D. Apply Cloth, Particle, Paint, and Fluid dynamics.

DIG2304C 3D Animation 3  
Credit Hours: 3  
Using Maya 3D software (or similar) you will create advanced 3D animation for characters; rigging techniques for body parts to create realistic and believable movements. You’ll learn advanced rigging concepts that involve MEL scripting and advanced deformation techniques and even how to set up a character pipeline.

DIG2311C Fundamental of Digital Media Using Flash  
Credit Hours: 3  
Web developers use Flash (or another animation tool) to create beautiful, resizable, and extremely small and compact navigation interfaces, technical illustrations, long-form animations, and dazzling effects for web sites and other Web-enabled devices (such as WebTV). Students will create graphics and animations using drawing tools or imported vector artwork; animate that artwork; and make interactive movies.

DIG2500C Multimedia Authoring  
Credit Hours: 3  
This course concentrates on entry-level skills in creating and implementing basic multimedia applications. The topics are covered in both theory and practice (hands-on). The software and hardware used in current industry-standard multimedia are covered in detail. Applications include multimedia design, authoring, and product delivery. The student uses many other feeder programs to complete his/her projects.

DIG2580C Digital Media Portfolio  
Credit Hours: 3  
This is a capstone course intended for students to apply knowledge gained in the areas of web, graphics, video or 3D production to create a polished, presentable collection of their best work (a portfolio), showcasing their talents as they prepare to enter the professional field.

DIG2940 Internship in Digital Media  
Credit Hours: 3  
An Internship in Digital Media will provide the student with practical work experience in the field. In addition, the student will produce an e-portfolio and resume to present to potential employers.

DSC1002 Terrorism & Domestic Security  
Credit Hours: 3  
A study of domestic and international terrorism as it relates to domestic security. Topics include terrorist organizations and motivations, investigating terrorism threats, conducting vulnerability assessments of potential terrorist targets, and the role of government agencies in response to a terrorist incident and recovery afterwards.
### DSC1006 Introduction to Homeland Security
**Credit Hours:** 3

This course will introduce students to the vocabulary and important components of Homeland Security. Students will learn about the important agencies associated with Homeland Security and their inter-related duties and relationships. Students will examine historical events that impact Homeland Security. Students will explore state, national, and international laws impacting Homeland Security and students will examine the most critical threats confronting Homeland Security.

### DSC2242 Transportation & Border Security
**Credit Hours:** 3

Overview of modern border and transportation security challenges (post 9/11 attacks to the present) as related to our transportation infrastructure, including seaports, ships, aircraft, airports, trains, train stations, trucks, highways, bridges, rail lines, pipelines and buses. The course will also explore technology used to enhance security of borders and transportation systems. Students will be required to discuss the legal, economic, political and cultural concerns associated with transportation and border security.

### DSC2590 Intelligence Analysis & Security
**Credit Hours:** 3

This course examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks or disasters, man-made and natural. It also explores the vulnerabilities of our national defense and private sectors and threats posed to these institutions. Students will discuss substantive issues regarding intelligence support of homeland security measures and explore how the intelligence community operates.

### EAP0100C Speaking/Listening I
**Credit Hours:** 3

EAP0100C is an elementary (CEFR A1) speaking and listening course designed to help students develop English speaking and listening skills. Students develop the ability to listen and respond appropriately in a variety of common academic and social situations. This course also emphasizes accurate and comprehensible pronunciation. Placement in EAP0100C is determined by placement tests and/or department recommendation. Students must earn a "C" or higher to proceed to EAP0200C.

### EAP0120C ESL Reading I
**Credit Hours:** 3

This is a level 100 beginning ESL reading course designed for students in English for Academic Purposes (EAP) programs. It emphasizes vocabulary and comprehension on a basic level.

### EAP0185C ESL Grammar/Writing I
**Credit Hours:** 6

A low-beginning level combined skills course for speakers of other languages designed principally to guide the students to the development of basic grammar and basic writing structures as applied to academic English. Students will develop writing skills in the context of guided discourse on personal topics with an emphasis on logical thought and mechanics.

### EAP0200C Listening/Speaking II
**Credit Hours:** 3

EAP 0200C is a pre-intermediate (CEFR A2) speaking and listening course designed to help students develop English speaking and listening skills. This course also emphasizes accurate and comprehensible pronunciation. Placement in EAP0200C is determined by successful completion of EAP0100C (a grade of "C" or higher) or placement tests and/or departmental recommendation. Students must earn a "C" or higher to proceed to EAP0300C.

### EAP0220C ESL Reading II
**Credit Hours:** 3

This is a level 200 high beginning ESL reading course designed for students in English for Academic Purposes (EAP) programs. It emphasizes vocabulary and comprehension on a basic level.

### EAP0285C ESL Grammar/Writing II
**Credit Hours:** 6

A high-beginning level combined skills course for speakers of other languages designed principally to guide the students to the development of basic grammar and writing structures as applied to academic English. Students will develop writing skills in the context of guided discourse on personal topics with an emphasis on logical thought and mechanics.
EAP0300C Listening/Speaking III  Credit Hours: 3
EAP0300C is an intermediate (CEFR B1) listening and speaking course designed to help students develop academic English speaking, listening, and note-taking skills. This course also emphasizes accurate and comprehensible pronunciation. Placement in EAP0300C is determined by successful completion of EAP0200C (a grade of "C" or higher) or placement tests and/or departmental recommendation. Students must earn a "C" or higher to proceed to EAP0400C.

EAP0320C ESL Reading III  Credit Hours: 3
This is a level 300, low intermediate ESL reading course designed for students in English for Academic Purposes (EAP) programs. It emphasizes vocabulary and comprehension on an intermediate level.

EAP0385C ESL Grammar/Writing III  Credit Hours: 6
An intermediate level combined skills course for speakers of other languages designed principally to guide the students to the mastery of grammar and writing structure applied to academic English.

EAP0400C Communication Skills IV  Credit Hours: 3
EAP0400C is a high-intermediate (CEFR B2) listening and speaking course designed to guide the student toward fluency and accuracy in spoken production of English in academic, professional, and social settings. The course involves the development of academic listening and note-taking skills. It also places an emphasis on presentations and speeches for a variety of rhetorical purposes. Placement in EAP0400C is determined by successful completion of EAP0300C (a grade of "C" or higher) or placement tests and/or departmental recommendation.

EAP0420C ESL Reading IV  Credit Hours: 3
This is a level 400 high intermediate ESL reading course designed for students in English for Academic Purposes (EAP) programs. It emphasizes vocabulary and comprehension on an intermediate level.

EAP0485C ESL Grammar/Writing IV  Credit Hours: 6
A high intermediate combined skills course for speakers of other languages designed principally to guide the students to the mastery of complex grammar and sentence structures, and basic paragraph writing.

EAP1520C Advanced Reading  Credit Hours: 3
This is an advanced reading course designed for English for Academic Purposes (EAP) students who have scored below 106 on PERT Reading or who require further development of reading skills in the English language. This course emphasizes literal, inferential, and critical comprehension skills, as well as analytical reading strategies and skills. In addition, the course emphasizes advanced vocabulary skills. Placement in EAP1520C is determined by successful completion of EAP0420C (a grade of "C" or higher), or placement test. Students must earn a C or higher to pass the course.

EAP1540C ESL Advanced Composition I  Credit Hours: 3
A composition course in English for speakers of other languages. Designed principally to guide the student to the mastery of paragraph structure using various para-graph modes and the multi-paragraph essay. The grammar focuses on elements which closely tie in with composition, e.g. connectors and sentence combining.

EAP1640C ESL Advanced Composition II  Credit Hours: 3
This is an advanced composition course in English for speakers of other languages. Students are given intensive practice in the writing of the multi-paragraph essay for the various modes. Emphasis is given to clear and logical development of ideas. Students apply advanced grammar skills and precise vocabulary usage to essay writing.

ECO2013 Principles of Macroeconomics  Credit Hours: 3
An introductory course in macroeconomic principles covering basic economic problems and concepts. Topics discussed and analyzed include basic economic problems of unemployment and inflation, as well as fiscal and monetary policies. Students will recognize the role of households, businesses and governments in the market economy.
and in their own lives. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**ECO2023 Principles of Microeconomics**
Credit Hours: 3
An introductory course stressing microeconomic theories. Topics studied include the theory and application of supply and demand elasticity; theory of consumer demand, utility; production and cost theory including law of diminishing returns; the firm's profit-maximizing behaviors under market models ranging from pure competition to pure monopoly; the theory of income distribution; comparative advantage, trade policies exchange rates, balance of payments, and other international issues.

**ECO2220 Money & Banking**
Credit Hours: 3
A general survey of the economics of money and the basic concepts of money; the financial system, financial intermediaries, and non-bank institutions, types of interest rates, the Federal Reserve, its structure and tools and monetary policy, financial regulations, and role of banking and money international finance.

**ECO3703 International Economics**
Credit Hours: 3
An exploration of why nations trade, the effects of trade on the economy, international commercial policy, balance of payments, exchange rate determination, the Eurocurrency markets, and international trade institutions.

**ECS2390 The Economy of Spain**
Credit Hours: 3
An analysis of the Spanish economic system covering the historical development in the public and private sectors; agriculture and industry; and foreign trade relations. Only offered in conjunction with the Semester-In-Spain program.

**EDF1005 Introduction to the Teaching Profession**
Credit Hours: 3
This course provides an overview of the American education system and the teaching profession. Its focus is teacher preparation for the 21st century. It examines the history of education, educational philosophies, school governance and funding, the rights and responsibilities of teachers and students, academic standards, teaching and assessment methods, and the needs of diverse learners. A special emphasis is placed on Florida Educator Accomplished Practices (FEAPs) and Florida Standards. This course has a mandatory 15-hour field experience component which is to be completed in an educational or alternate setting.

**EDF2070 Perspectives in Education**
Credit Hours: 3
A study of the principles of American education. Emphasis is placed on the historical, philosophical, sociological, and legal foundations of education in America and their impact on curriculum development, learning, and the teaching profession.

**EDF2085 Intro to Diversity & Exceptionalities for Education**
Credit Hours: 3
Designed for the prospective educator, this explores issues of diversity and the impact of culture, socioeconomic background, ethnicity, race, gender, sexual orientation, religion, exceptionality, and language on students' educational experiences. Students will be provided exposure to the Florida Educator Accomplished Practices (FEAPs) and Florida Standards. A minimum of 15 hours of field experience is required in an educational or alternate setting.

**EDF3280 Instructional Strategies**
Credit Hours: 3
This course provides the educator with varied research based instructional strategies to reach all 21st century learners in the K-12 classroom setting. The course covers multiple aspects of teaching such as organizational, leadership, student centered and teacher centered theoretical frameworks applied to the teaching profession.

**EDF4430 Educational Tests & Measurements**
Credit Hours: 3
This course helps Education majors develop a philosophy of assessment and understand how a variety of measures combine to provide an accurate picture of student progress and achievement in the current multicultural classroom, develop knowledge and skills necessary to measure and assess learner progress effectively and develop actual teacher
assessment skills and acquire skills in and perspectives on traditional and alternative assessment strategies. Topics include the basic principles of measurement, formative and summative assessment strategies, test construction, performance assessments, reading and interpreting data from state and standardized achievement tests, and fairness in accommodating diverse learners.

EDF4930 Special Topics in Teacher Education  Credit Hours: 1
This course focuses on current and emerging issues in teacher education. Its format and topic will vary by semester.

EDG1006 Florida Teacher Certification Exam Process  Credit Hours: 3
This course introduces Education students to the Florida Teacher Certification Exam and process.

EDG2949 CO OP Work Experience  Credit Hours: 3
A course designed to provide training in a student’s field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer.

EDG4410 Classroom Management  Credit Hours: 3
This course provides an overview on effective classroom management in the K-12 classroom. It provides educators with tools on how to plan for a successful school year. It equips teachers with a solid foundation on classroom management as it relates to theories, data, communication, diverse settings, standardized assessments, standards, ethics and relationship building.

EDP2002 Introduction to Educational Psychology  Credit Hours: 3
This course reviews psychological principles relevant to effective teaching and learning. Stage theories will be used to address issues of pupil variability. The course will enable students to design and use objectives. Units on instruction will include behavioral, information processing, humanistic and cognitive theories. Finally, measurement and evaluation, as well as classroom management, will be addressed.

EDP4004 Principles of Educational Psychology  Credit Hours: 3
This course provides a foundation in educational psychology and its application to classroom settings. Special emphasis is placed on development, learning theory, intelligence, motivation, memory, higher-order thinking, diversity, and instructional and assessment strategies.

EEC1200 Early Childhood Education  Credit Hours: 3
This course reviews the history and present day aspects of early childhood programs for infants, toddlers, preschool, and school children. Basic principles and foundations of early childhood education are covered.

EEC1603 Child Guidance  Credit Hours: 3
This course provides child guidance and group management techniques to foster the development of self-esteem, self-control, and social skills in young children.

EET1015C DC Circuits  Credit Hours: 3
This is a first course in electric circuits. Upon completion of this course the student should demonstrate an understanding of the definitions and interrelationships of voltage, current and power in circuits containing passive circuit elements and multiple sources. Extensive laboratory experience is included.

EET1025C AC Circuits  Credit Hours: 3
Upon completion of this course the student shall demonstrate a knowledge of circuit analysis using alternating voltage sources, including the behavior of resistive and reactive passive circuit elements, and frequency and transient response. Magnetic circuits, resonance and ideal transformers are also included. Extensive laboratory experience is included.

EET1084C Introduction to Electronics  Credit Hours: 3
This course provides an introduction to the basic fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. This course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to basic measurement involving both analog and digital circuits.

**EET1141C Linear Techniques I**  
Credit Hours: 3  
This is the first course covering semi-conductor devices and laboratory experiments. Topics covered include: semi-conductor principles, rectifier diodes, Zener diodes, BJT amplifiers, negative feedback amplifier, Field effect transistors and FET amplifiers. Extensive laboratory experience is included.

**EET2142C Linear Techniques II**  
Credit Hours: 3  
This is the second course covering advance semi-conductor devices and laboratory measurements. The topics covered include: power amplifiers, frequency response of amplifiers, thyristors, LED and special diodes, operation amplifiers, filters, voltage regulators, basic communications circuits and programmable analog devices. The student will be able to use computer software to solve technical problems, program arrays, and aid in measurement systems. The course requires an extensive laboratory experience.

**EET2326C Electronic Communications**  
Credit Hours: 3  
Basic electronic communications systems, RF amplifiers and oscillators, amplitude modulation, single side band modulation, frequency and phase modulation, pulse modulation, demodulation, and digital communication methods. Extensive laboratory experience.

**EET2355C Data Communications**  
Credit Hours: 3  
The student will study data communications systems including pulse amplitude, pulse width modulation and RS-232, RS-422, IEEE-488. Descriptions of BISYNC, HDLC and local area networks will be including UART and MODEM implementation.

**EET2358C Advanced Communication Technology**  
Credit Hours: 3  
This is an advanced course in telecommunication technology, with topics covering analog and digital communication, switching systems, Digital Modulation, Wireless communication systems, Personal Communication Systems, and Paging and Wireless Data Networking. Extensive laboratory practice is included in the course.

**EEX3011 Introduction to Exceptional Student Education**  
Credit Hours: 3  
This course will focus on the characteristics and needs of students with disabilities. Course content will include the different types of programs and services that make up exceptional student education (ESE) and the history on how they came to exist. The Introduction to Exceptional Student Education course will serve as the foundation for the development of a personal and professional understanding and philosophy of ESE.

**EEX3094 Nature & Needs of the Autism Spectrum Disorder STD**  
Credit Hours: 3  
This is an overview course examining issues in providing educational services to individuals with Autism Spectrum Disorder Students (ASD). Emphasis will be placed on definitions and concepts, classification, prevalence, behavioral characteristics, communication, intervention strategies, classroom technology, multicultural issues, and family involvement. Service delivery systems will be reviewed and current trends discussed. 10 school-based hours.

**EEX3280 Transition Planning for Students with Disabilities**  
Credit Hours: 3  
This course is designed for students enrolled in the Bachelor of Science Degree program in Teacher Education. This is an overview course examining issues related to transition planning for secondary (high school) exceptional education students. Emphasis will placed on data collection, assessments, self-advocacy and adult services. Federal requirements for the development of the Transition Individualized Education Plan (TIEP) will be reviewed and transition process from school to post school will be covered.
EEX3601 Positive Behavioral Support  Credit Hours: 3
This is an overview course examining issues related to positive behavioral supports for exceptional education students. Emphasis will be placed on data collection, analysis and interventions related which address problem behaviors in the classroom. This course is designed to prepare teachers for the educational management of exceptional students with emphasis on behavior management and consultation skills. Students will gain a basic knowledge of how to create and maintain an on-task, safe and healthy environment for learning in the exceptional classroom as well as the inclusive classroom.

EEX4293 Assessment & Strategies in Exceptional Student Education  Credit Hours: 3
This course introduces and familiarizes students with formal and informal evaluation techniques and materials for the educational assessment of exceptional learners, including those from diverse linguistic backgrounds, in a variety of settings and inclusive environments.

EEX4472 Instructional Practices for Students with Moderate/Severe Disabilities  Credit Hours: 3
This course will examine how particular types of low-incidence disabilities; including intellectual disabilities, autism, physical disabilities, traumatic brain injuries, deafness, blindness, multiple disabilities, and other health impairments, affect academic performance. Students will learn and demonstrate current methods for teaching individuals with low incidence disabilities. Students will complete 10 hours of school-based field experience with students with low incidence disabilities in special education school. These hours are beyond the required 48 classroom contact hours.

EEX4486 Differentiated Instruction for Students with Exceptionalities  Credit Hours: 3
This course is designed to provide educators with a practical framework of research-based reading, writing and mathematics curriculum and commercial and software programs to effectively teach students with learning, behavior and/or attention difficulties in inclusive settings. The course emphasizes current research and effective practice from proactive through intervention strategies.

EEX4843 Teaching Exceptional Learners Practicum  Credit Hours: 3
This course includes characteristics and educational needs of all types of exceptional learners. It is designed to prepare pre-professional educators for the student teaching internship. Pre-professional educators work directly with classroom teachers and have opportunity to teach both large and small group activities. This course is designed to develop the competencies relative to program planning, instruction, daily scheduling, record keeping, evaluation, classroom management, reporting to parents, professional organizations and teacher ethics. Students spend a minimum of 60 school-based hours in the classroom.

EEX4945 Student Teaching Internship in ESE  Credit Hours: 9
The purpose of the ESE Student Teaching course is for the intern to apply and integrate ESE teaching competencies and responsibilities for teaching students with disabilities in a K-12 school setting. The intern will incrementally assume all duties of the mentor ESE Teacher in the areas of planning, assessment, instruction, management, collaboration, and other essential classroom activities. The ESE Student Teaching course is designed to provide interns with a field-based experience in an appropriate ESE setting. Through the ESE Student Teaching course, the interns will demonstrate mastery of the six Florida Educator Accomplished Practices. Note: The Internship is composed of a minimum of 37.5 contact hours per week for 15 weeks.

EGS1001 Introduction to Engineering  Credit Hours: 3
This course is a basic introduction to engineering. It will explore the various engineering fields, engineering problem solving, and basic math and physics used by engineers. Other topics such as safety, ethics, and engineering communications will also be addressed.

EGS2949 CO OP Work Experience  Credit Hours: 3
A course designed to provide training in a student's field of study through work experience. Students are graded on
the basis of documentation of learning acquired as reported by students and employer.

**EME2040 Introduction to Educational Technology**  
**Credit Hours:** 3  
This course is a theory and application course that introduces students to traditional and cutting-edge technologies, and educational resources and how they are used in the teaching profession. Students will be provided an overview of the Florida Educator Accomplished Practices, and Florida Standards.

**EME2041 Educational Technology Integration in Everyday**  
**Credit Hours:** 3  
This course will explore applications of technology integration to improve teaching and learning. Students will learn ways to use technology for the development of independent learning in order to facilitate active, learner-centered classroom experiences.

**EME3410 Enhancing Mathematics & Science Education with Technology Applications**  
**Credit Hours:** 3  
This course will explore the interaction of K12 mathematics and science content, technology that supports mathematics and science teaching and learning, and the cognitive and social processes of learning that yields maximum learning opportunities for all students. Students will identify technologies that align with student intellectual abilities and learning styles in mathematics and science. Incorporate inquiry-based learning with technology and discover the interdisciplinary connections between mathematics, science and technology.

**EMS1000 Introduction to Emergency Medical Services**  
**Credit Hours:** 1  
Introduction to Emergency Medical services as a career. The course will describe roles and responsibilities, career and advancement possibilities. The course will also highlight the required skills in; math, reading and studying. Also highlighted is basic anatomy and medical terminology.

**EMS1119 Emergency Medical Technician Basic**  
**Credit Hours:** 6  
This course is designed to prepare the basic emergency medical technician in accord with U.S. Dept. of Transportation curriculum and Florida State EMS guidelines includes an introductory survey of emergency medical services including medical legal/ethical aspects, role of the EMT, patient assessment, care of wounds and fractures, airway maintenance, medical and environmental emergencies, patient transportation, emergency, childbirth, basic extrication.

**EMS1119L Emergency Medical Technician Skills Laboratory**  
**Credit Hours:** 2  
Lab practice and testing of basic emergency medical technician skills included in the Department of Transportation EMT ambulance curriculum and Florida State EMS guidelines. Skills include CPR at AHA basic rescuer level, patient assessment, triage, airway maintenance, bandaging, splinting, mast suit application, emergency childbirth, and basic extrication.

**EMS1411 EMT Hospital Clinical**  
**Credit Hours:** 2  
Practical application of (EMT), emergency medical technician clinical knowledge and skills under professional supervision in the Hospital setting. Course emphasizes the development of student skill in recognition of signs and symptoms of illness and injuries and in the proper procedures of emergency care.

**EMS1421 Emergency Medical Technician (EMT) Field Clinical**  
**Credit Hours:** 2  
Practical application of EMT emergency medical technician clinical knowledge and skills under the professional supervision in the prehospital or field setting. Provides for observation and patient care experiences in EMS rescue vehicles. Course emphasizes the development of student skill in recognition of signs & symptoms of illness and injuries and in the proper procedures of emergency care.

**EMS2010 Paramedic A&P, Pathophysiology, Life Span Develop**  
**Credit Hours:** 4  
Integrates a complex depth and comprehensive breadth of knowledge of the anatomy and physiology of all human systems. Additional subjects are Pathophysiology and Life Span Development. Objectives from the National EMS
Education Standard Competencies on the anatomy, physiology, pathophysiology, and life span, development will be addressed.

**EMS2201 Paramedic Clinical Experience I**  
Credit Hours: 1  
This is the first Hospital Clinical for Paramedic 1 students. The emphasis will be to review basic EMT skills and improve Patient Assessment skills and documentation. Invasive Medication Administration skills listed in P1 Lab (EMS2631L) may be performed on a case-by-case basis as patient contact allows the performance of such skills. Topics include: (1) Patient Assessment, (2) Workforce Safety & Wellness, (3) Documentation, (4) Cardiology, (5) Medication Administration skills on a case-by-case basis.

**EMS2311 EMT Leadership**  
Credit Hours: 1  
Introduces the student to professional issues in EMS through special projects.

**EMS2631 Paramedic Science I**  
Credit Hours: 4  

**EMS2631L Paramedic Science I Laboratory**  
Credit Hours: 1  
Workforce Safety and Wellness, Ambulance Operations, BLS Competency, Patient Assessment, Basic Medication Administration, Basic Cardiac Skills, Airway Management and Ventilation. In addition, basic math computation, and drug knowledge for medication administration are continued to be taught throughout Paramedic education. Course content includes current National EMS Education.

**EMS2632 Paramedic II Science**  
Credit Hours: 3  
P2 Science integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with a medical complaint. Topics deal primarily with medical issues: Pharmacology, Emergency Medications, Airway Management, Respiratory System, Field Codes, Management and Resuscitation of the critical patient. In addition, basic math computation and drug knowledge for medication and administration are continued throughout Paramedic education. Course content includes current National EMS Education Standard Competencies.

**EMS2632L Paramedic Science II Laboratory**  
Credit Hours: 1  
Skills Laboratory related to pharmacology, venous access and medication administration. Patient Assessment skills including history taking, techniques of physical examination, assessment procedures, clinical decision making, and radio communications are included. Other topics include Airway Management/Ventilation and cardiology.

**EMS2633 Paramedic II - Cardiology**  
Credit Hours: 3  
Topics deal with Airway Management and ventilation. Selected units from Medical Emergencies are Pulmonary conditions, and Cardiology to include an introduction to 12 Lead Interpretation and the prehospital management of acute myocardial infarction. Material covers 1998 U.S. Department of Transportation, (DOT), National Paramedic Curriculum objectives for Module 2, and Module 5, Units 1, 2.

**EMS2634 Paramedic III - Trauma**  
Credit Hours: 3  
Topics deal with Trauma patient care including: Trauma Systems & Mechanisms of Injury; Bleeding; Soft Tissue Injury, Burns; Face & Neck Trauma; Head & Spine Trauma; Chest Trauma; Abdominal & Genitourinary Trauma; and Orthopedic Trauma. Additional topics include: Environmental Emergencies; Transport Operations; Vehicle Extrication & Special Rescue; Hazardous Materials; and Crime Scene Awareness. Material includes the most current objectives and learning outcomes from the National Paramedic Curriculum.
EMS2634L Paramedic Science III - Trauma Laboratory  
Skills lab dealing with: Trauma Skills - Bleeding Control, Tourniquet application, Splinting bones and joints, Traction splint, Spinal Immobilization, Chest Decompression, and Cricothyroid Emergency Airway procedures. Patient scenarios - based on new and previously acquired skills in Airway Management, Pharmacology, Medication Administration, Cardiology, P3 Trauma, and P3 Medical. In addition, basic math computation and drug knowledge for medication administration are continued throughout Paramedic education. Course content includes current National EMS Education Standard Competencies.

EMS2635 Paramedic III - Medical  
P3 Medical integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with a medical complaint. Topics deal primarily with Medical Issues: Neurology, EENT, Abdominal & GI, GU & Renal, Gynecology, Endocrine, Hematology, Immune Emergencies, Infectious Diseases, Toxicology, and Psychiatric Emergencies. In addition, basic math computation and drug knowledge for medication administration are continued throughout Paramedic education. Course content includes current National EMS Education Standard Competencies.

EMS2636 Paramedic IV Science  
P4 Science integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a comprehensive treatment/disposition plan for a patient with an Obstetric, Neonate, Pediatric, Geriatric, and Special Challenges Emergency. Topics also include: Transport Operations, Incident Management & Mass Casualty Situations, Vehicle Rescue and Special Rescue, Hazardous Materials, Terrorism, Disaster Response and Crime Scene Awareness. In addition, basic math computation and drug knowledge for medication administration is continued throughout Paramedic education. Course content includes current National EMS Education Standard Competencies.

EMS2636L Paramedic ScienceIV Laboratory  
Final skills Laboratory dealing with scenarios covering all aspect of the curriculum. Demonstration of skill competencies for Certification in ACLS, PEPP, 12 Lead ECG, Support, Emergency Management of Acute Stroke, and Traumatic Brain Injury required.

EMS2641 Paramedic II Hospital Clinical  
Second of Four hospital clinical sessions, focused at the Paramedic 2 level, stressing Advanced Life Support (ASL) skills for the paramedic student. Provides for directed supervised experiences in local hospitals. Topics include: (1) Airway, (2) Respiratory, (3) Patients with Special Challenges, (4) Cardiology, (5) Responding to the Field Code, (6) Management & Resuscitation of the Critical Patient, (7) Toxicology. Skills involving (8) Patient Assessment, and (9) Documentation (paper and electronic) are constantly being evaluated and improved. Skills from prior EMS training can be performed on a case-by-case basis depending on patient contact opportunities.

EMS2642 Paramedic 3 - Hospital Clinical  
Third of four hospital Courses continuing to practice previously learned skills in a Hospital setting. Provides for directed supervised experiences in local hospitals. Topics include: (1) Bleeding, (2) Soft Tissue Injury, (3) Burns, (4) Face & Neck Trauma, (5) Head & Spine Trauma, (6) Chest Trauma, (7) Abdominal & Genitourinary Trauma, (8) Orthopedic Trauma, (9) Environmental Emergencies, (10) Neurological Emergencies, (11) Diseases of the Eyes, Ears, Nose & Throat, (12) abdominal & Gastrointestinal Emergencies, (13) Endocrine Emergencies, and (14) Psychiatric Emergencies. Topics of (15) Patient Assessment and (16) Documentation are continuous throughout the program. Additional Seminar time may be needed to achieve these objectives.

EMS2643 Paramedic 4 - Hospital Clinical  
Last of four hospital Courses involving patient care in a variety of emergency and health care agency sites Clinical experiences with patients of all age groups and medical-traumatic conditions is continued. Data recording of skill competencies on web based computer system is required. Health and Liability insurance required.

EMS2650 Paramedic Science I Field  
First of four Courses dealing with application of knowledge and skills in an EMS field rescue environment. Provides
for directed, supervised experiences on EMS Advanced Life Support (ALS) vehicles. Activities limited to practice of basic life support skills, assisting as a member of the EMS team, (1) Patient Assessment, (2) Workforce Safety & Wellness, (3) Documentation (paper and electronic), (4) Transport Operations, (5) Cardiology basics, and observation of paramedic level skills/activities. With proper sign-offs in Paramedic 1 Lab, selected (6) Medication Administration skills may be performed on a case-by-case basis depending on patient contact opportunities.

**EMS2651 Paramedic Science II Field**  Credit Hours: 2
Second of four field Courses that provides for directed, supervised experiences on EMS Advanced Life Support (ALS) vehicles. Emphasis on clinical activities related to physical assessment with emphasis on patients with Cardio-Respiratory problems. Invasive procedures for IV therapy and medication administration are introduced. Data recording of skill competencies on web based computer system is required.

**EMS2652 Paramedic Science III Field**  Credit Hours: 3
Third of four field Courses stressing continuation of Advanced Life Support Skills for the Paramedic student. Provides for directed, supervised experiences on Advanced Life Support (ALS) vehicles. Emphasis on clinical activities related to trauma care, medical emergencies, obstetrics, pediatrics, geriatrics and specialty areas.

**EMS2653 Paramedic Science IV Field Internship**  Credit Hours: 4
Final field course where student serves as team leader on EMS calls under supervision of EMS agency preceptor. Provides for directed, supervised experiences on Advanced Life Support (ALS) vehicles with increasing responsibility for the management of the EMS response.

**ENC0015C Developmental Writing I**  Credit Hours: 4
This course provides an overview of the fundamentals of grammar, mechanics, usage, sentence structure, and paragraph development. A laboratory component will supplement classroom instruction.

**ENC0017C Accelerated Literacy Reading/Writing Integration**  Credit Hours: 4
This course will focus on critical thinking skills required to read, analyze, and synthesize written information, including the expansion of vocabulary and grammatical/mechanical skills required to successfully negotiate the writing process in preparation for reading and writing at the college level.

**ENC0025C Developmental Writing II**  Credit Hours: 4
A refinement of grammatical, mechanical, and usage principles including an overview of the strategies of paragraph and essay development. A laboratory component will supplement classroom instruction.

**ENC1101 Composition I**  Credit Hours: 3
ENC1101 is a university parallel course that requires students to learn and practice writing by creating original compositions, exploring basic rhetorical forms such as narration, exposition, and argumentations. Students will also develop research skills and learn to incorporate research material through the writing process. For non-exempt students, placement in ENC1101 is determined by both standard and departmental assessment tests. Students must earn a grade of C or higher to meet the requirements of the Gordon Rule for writing. This is a writing credit course that focuses on extensive writing and revision.

**ENC1102 Composition II**  Credit Hours: 3
Composition II is designed to further develop a student's communication skills by building on the writing and critical thinking strategies learned in ENC1101. The course requires students to observe the conventions of Standard American English and create documented essays, demonstrating a students' ability to think critically and communicate analytically. Selected texts supplement the course and provide topics for discussion and assignments. Students use library research methods for primary and secondary sources to produce MLA style documented and well-argued research essays and projects. This is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.
ENC2210 Professional and Technical Writing  Credit Hours: 3
A composition course focusing on writing for business, science, and technology. Assignments include letters, memos, resumes, reports, proposals, an oral presentation, and the use of graphics. Students use a variety of research and investigative techniques to produce documented papers on science, business or technological subjects.

ENG2101 The Film as Literature  Credit Hours: 3
Focuses on the relationships of two art forms - literature and film - and pays particular attention to how film has evolved as an art form and the ways which literature and its elements have influenced film. Also examines uses of literary techniques and the ways they have been adapted to film. Selected novels, short stories, plays, essays and/or memoirs may also be read as a means of comparing film and literature. This is a writing credit course with international/intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ENL2012 British Literature to 1798  Credit Hours: 3
Traces the development of the thematic, linguistic, and literary characteristics of British literature up to the 18th century. Emphasis will be placed on Chaucer, Shakespeare, Milton, Swift, and authors that reflect the changing literary canon. This is a writing credit course with international/intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ENL2022 British Literature Since 1798  Credit Hours: 3
Students will be introduced to diverse representative works of British literature published since 1798. Texts may include all genres. Upon successfully completing the course, students will understand the significant works, writers, concepts, and movements of the period. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ENL2330 Introduction to Shakespeare  Credit Hours: 3
This course introduces students to the background of Shakespeare's life and work. Shakespeare's sonnets or narrative poems and plays are presented and the structure, content, and vision of Shakespearean histories, comedies, tragedies, and romances are studied. The course offers an opportunity to reinforce critical reading, writing, and research skills with regard to an iconic writer of western literature.

ENY1001 Bugs & People  Credit Hours: 3
A survey course in entomology for non-majors. The focus will be on both beneficial and detrimental impacts of insects and related arthropods and their role in the environment. Interactions with man, such as insects as global culture, global mythology, disease factors, agricultural pests, urban pests, indicators of environmental health, pollination and forensic crime-solving tools will be given emphasis. Both current and historical events and their impacts will be examined. The students will be given a non-anthropogenic view and expand their knowledge about the abundance and diversity of the largest group of animals on the Earth.

ENY3005 Principles of Entomology  Credit Hours: 2
An introduction to entomology with lecture and labs on insect structure, development, classification, habits and control.

ENY3005L Principles of Entomology Laboratory  Credit Hours: 1
An introduction to entomology with lecture and labs on insect structure, development, classification, habits and control.

ENY3222 Biology & Identification of Urban Pests  Credit Hours: 3
An instructional program that describes insects. Including life cycle, morphology, physiology, ecology, and taxonomy of urban pests.

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ENY3225 Principles of Urban Pest Management  Credit Hours: 3
This course and will cover the methods of managing urban pests, such as cockroaches, fleas, termites, flies, stored food pests, and ants. Chemical and nonchemical methods of control will be emphasized.

ENY3228 Urban Vertebrate Pest Management  Credit Hours: 2
This is a companion course designed to complement ENY3225, Principles of Urban Pest Management. It covers vertebrate pests and their control in the Urban Environment, principally structural and landscape pests. Much of the information is also applicable to nursery settings.

ENY4060 Medical and Veterinary Entomology  Credit Hours: 3
This course presents the major tick, mite and insect vectors of disease to man and animals. Students will learn to identify and understand the morphology, behavior and life cycles of disease vectors. Disease-cycles, prevention, impact and treatment will be discussed. Disease transmission and epidemiology of vector-borne diseases will also be covered.

ENY4161 Insect Classification  Credit Hours: 3
Classification of major families of adult insects with emphasis on their identification, habitat and niche. A properly curated collection is required.

ENY4592 Mosquito Biology  Credit Hours: 3
Mosquito Biology is an introduction to mosquito classification, natural history, ecology, physiology, population dynamics, mosquito-borne disease and control. The relationships between mosquitoes, humans, and the environment, along with the mechanisms of pathogen propagation and transmission will be emphasized.

ENY4905 Review of Scientific Literature  Variable Credit Course (1-3 Credit Hours)
A course where critical thinking is developed through the analysis and critique of scientific literature and research.

EPI0001 Classroom Management  Credit Hours: 3
This course provides an overview on effective classroom management in the k-12 classroom. It provides educators with tools on how to plan for a successful school year. It equips teachers with a solid foundation on classroom management as it relates to theories, data, communication, diverse settings, standardized assessments, standards, ethics and relationship building.

EPI0002 Instructional Strategies  Credit Hours: 3
This course prepares the participant to become proficient in the application of a variety of instructional strategies based on knowledge of learning styles, cooperation and collaborative group activities, accommodation for exceptional students, and to develop effective lesson plans that infuse technology.

EPI0003 Technology  Credit Hours: 3
This course provides an overview on effective classroom management in the k-12 classroom. It provides educators with tools on how to plan for a successful school year. It equips teachers with a solid foundation on classroom management as it relates to theories, data, communication, diverse settings, standardized assessments, standards, ethics and relationship building.

EPI0004 The Teaching & Learning Process  Credit Hours: 3
This course provides the participant with a foundation in various learning theories as applied in the instructional process. Standardized testing interpretation and use of results is stressed. Student characteristics such as exceptionalities, motivation, persistence, and second language acquisition will be addressed.

EPI0010 Foundations of Research-Based Practices in Reading  Credit Hours: 3
This module provides substantive knowledge of language structure and function and cognition of phonemic awareness, phonics, fluency, and comprehension. Further, it provides knowledge of the integration of the reading components. Instruction in this module is grounded in scientifically-based reading research as a mechanism to inform
instructional practice.

**EPI0020 The Teaching Profession**  
Credit Hours: 2  
This course provides the foundation for becoming a productive member of the teaching profession. The participants will gain understanding of the organization and administration of the public school, the laws governing teachers, the code of ethics, and the purpose of schools. This course develops a professional perspective and creates a sense of grounding in the profession of teaching.

**EPI0030 Diversity in the Classroom**  
Credit Hours: 2  
This course provides the participant with an understanding of the variety of backgrounds and cultures that may be found in a typical classroom. The participant will gain a broader view of the social aspects of diversity and reevaluate personal beliefs and prejudices that may adversely affect the learning process.

**EPI0940 Field Experience**  
Credit Hours: 1  
This course is designed to provide the opportunity to the student with the experience of observing, interacting and working with a school population.

**EPI0945 Field Experience**  
Credit Hours: 1  
This course provides the opportunity to gain insight into the instructional process by completing 15 hours of field experience in public, charter, or private schools. Cohorts will meet together to discuss these experiences and to relate them to their observations of students as well as student behaviors and interactions in the schools.

**ESC1000 Earth Science**  
Credit Hours: 3  
An integration of the three classic disciplines of the earth sciences: geology, meteorology, and oceanography. Course will focus on the basic principles governing these disciplines and the effect of each on man.

**ESC1000L Earth Science Laboratory**  
Credit Hours: 1  
This course will have experiments and exercises that will be investigating the hydrosphere, lithosphere and atmosphere of earth. The earth will also be mapped and investigated as an object in space. At least three of the following five units will be covered: (1) Introduction to Laboratory Study, (2) The Solid Earth, (3) Earth's Waters, (4) Earth's atmospheres and (5) Mapping. A special fee will be charged.

**ESC4074 Weather & Climate**  
Credit Hours: 3  
This course provides an introduction to general meteorology and atmospheric sciences for students in the TEP (Teacher Education Program). It includes the composition and structure of the atmosphere and characteristics that affect it, such as temperature, humidity and pressure. The course examines the development of meteorological phenomena, such as storm systems, hurricanes, weather fronts and cloud formations. Climatologic concepts will also be explored. This course maintains scientific integrity and addresses technologies used in both meteorological and climatic studies.

**ETD1320 Basic CAD**  
Credit Hours: 3  
First course in computer aided design (CAD). Laboratory work using AutoCAD software. Topics include fundamentals of DOS, AutoCAD command structure, setting units and limits, drafting primitives, layering, use of editing tools; grid, snap, and axis commands. Assignments requiring extensive use of the CAD lab.

**ETD2350C Advanced CAD**  
Credit Hours: 3  
Covers additional topics in AutoCAD which include blocks, move and copy, array, mirror, text, text styles, 3-D and isometric modes. The development of macro operations.

**EPI1110C Introduction to Quality Assurance**  
Credit Hours: 3  
This course defines the role of quality in an industrial environment. Topics include the use of quality management techniques and quality philosophies, process development, techniques used for evaluation, approaches used on continuous operations, methods used to control quality, and the International organization for Standardization (ISO) series of standards. The responsibility of quality assurance during the engineering, manufacturing, and marketing of a
ETI1420 Processes & Materials  
Credit Hours: 3  
This course provides coverage of the characteristics, fundamentals, and manufacturing properties of materials, including metal alloys, polymers, ceramics, and composites. The metal-casting processes and the shaping and forming processes are also covered along with the machines needed for manufacturing.

ETI1622 Concepts of Lean and Six Sigma  
Credit Hours: 4  
This course provides students with an introduction to the fundamentals of lean, and Six Sigma. A comprehensive overview of the lean and six sigma methodologies including the Define, Measure, and Control phases will be presented.

ETI1701 Safety  
Credit Hours: 3  
This course focuses on the theories and principles of occupational safety and health in a practical and useful real world job related setting. The major topics include the Occupational Safety and Health Administration (OSHA) compliance, safety standards, code enforcement, ergonomic hazards, mechanical hazards, falling, lifting, electrical hazards, fire hazards, industrial hygiene, radiation, noise, emergencies, and environmental safety.

ETI2610 Principles of Six Sigma  
Credit Hours: 4  
This course provides students with an introduction to the basic principles and theories of Six Sigma as used in the continual improvement process. The course examines the tools most common to six sigma projects and how and when to use them. Course coverage focuses on measurement methods, data collection, data integrity, and graphical methods of presenting findings.

ETI2623 Tools for Lean Manufacturing  
Credit Hours: 4  
This course provides students with an overview of lean manufacturing concepts, and a working knowledge of the tools required to implement and maintain a lean manufacturing facility. Course coverage includes mistake proofing, the 5Ss for operators, quick changeover, overall equipment effectiveness (OEE), cellular manufacturing, and the Kanban system.

ETM1010C Measurement & Instrumentation  
Credit Hours: 3  
This course provides the basic foundation for both mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, gages, and other types of measuring equipment. The course will also introduce the student to the basic measurement techniques employing electronic test equipment including the operation and usage of digital multi-meters, function generators, and oscilloscopes.

ETP2402C Introduction to Solar Photovoltaic (PV) Systems  
Credit Hours: 3  
This course delivers an introduction to background essential theory, principles, and future of distributive energy technology. It focuses on solar/photovoltaic systems work and integrate with the electrical grid. This course is the first of a two-part series (precursor to the installation course EET2551C) that will prepare the student for the North American Board of Certified Energy Practitioners (NABCEP) certification.

ETP2410C Installation of Solar Photovoltaic (PV) Systems  
Credit Hours: 3  
This course covers the design and installation of photovoltaic systems. It is the second course in a two-part series (follow-up to the Introduction to PV Systems EET 2550) which provides all the content necessary to prepare the student for the North American Board of Certified Energy Practitioners (NABCEP) certification.

ETS2224C Fiber Optic Communications  
Credit Hours: 3
This extensive Laboratory experience covers fiber optic communication systems and devices. Topics include electronic and optical devices, splices and fiber optic cables as well as telecommunications applications of fiber optic systems.

**ETS2436C Biomedical Instrumentation I**  
**Credit Hours:** 3  
Students will acquire proficiency in biomedical equipment maintenance through classroom and laboratory environment and will gain familiarity with and learn to evaluate, troubleshoot, test, and repair various types of biomedical equipment. Students will also learn to function in a hospital environment through an internship in the biomedical department of a participating hospital or biomedical equipment company.

**ETS2542C Programmable Logic Controllers (L)**  
**Credit Hours:** 3  
This course teaches the fundamental principles of Programmable Logic Controllers (PLCs), and how they are used to control industrial processes. Topics covered are PLC hardware, number systems and codes, fundamentals of logic, PLC programming, wiring and ladder diagrams, programming timers, and programming counters.

**ETS2940 Biomedical Engineering Tech. Internship**  
**Credit Hours:** 3  
The student will participate in a 13 weeks internship, 24 hours per week at a cooperating hospital. Topics will include orientation, orientation to biomedical engineering, medical instrumentation theory, safety standards, "hands-on" preventive maintenance procedures and equipment repair activities. The hospital biomedical engineering staff will directly supervise all aspects of this course.

**EUH1000 Western Civilization: Ancient through Renaissance**  
**Credit Hours:** 3  
Historical survey of Western culture from its roots in the ancient Near East to the beginning of the early modern period. Provides students with broad foundation of knowledge to understand socio-economic, intellectual, political and other cultural forces which have shaped (and continue to shape) Western civilization. Students will explore and apply general principles of historical methodology, and will develop their critical reading, thinking, and writing skills throughout the course. Geographic range: Near East, Mediterranean basin, Western Europe. Course themes comprise: development, expansion, and cultural influence of Greco-Roman civilization; encounters between diverse cultures over the several millennia which comprise Western Civilization, and the transformations which result from such encounters; the rise and fall of governmental, economic, and social systems; and the intersection of cultural institutions and historic events. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**EUH1001 Western Civilization: Reformation through Modern**  
**Credit Hours:** 3  
This course surveys the major political, social, economic, cultural and international developments that shaped Western Civilization from the 17th century to the 21st century. Major topics include the evolution of the European nation-state, the emergence and consequences of modern political ideologies, and the roles of revolution, war, industrialization and technological innovations in an era that saw Europe achieve and then lose world hegemony. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**EUH2032 History of the Holocaust**  
**Credit Hours:** 3  
This course examines the historical origins, execution, and consequences of the Holocaust.

**EUH2052 History of Spain**  
**Credit Hours:** 3  
This course will examine Spain's historical development from prehistoric times to the present. Particular emphasis is placed on tracing the effects upon modern Spain of the major events in the nation's history, as well as the impact on the country of historical phenomena such as the Renaissance, the Enlightenment, the Napoleonic Wars and industrialization. The last part of the course examines the Spanish Civil War, Francoism and the country's subsequent reemergence in the international community.
EVR1001 Introduction to Environmental Science  Credit Hours: 3
Study of the physical environment, its relationship with the biosphere, and man's impact upon natural systems. This course includes ecological systems, Florida environments and geology, pollution and environmental regulations, renewable and nonrenewable resources, and sustainability. This course meets General Education requirements in the Biological and Physical Sciences. Placement by Testing Department.

EVR1263 Fundamentals of Air Pollution  Credit Hours: 3
This course will cover the fundamentals of air pollution like various types of pollutants, their sources and health effects they on humans, animals and plants; monitoring and control aspects of gaseous and particulate pollutants; meteorological aspects governing the air pollution; automobile pollution; air pollution legislation and standards.

EVR1858 Environmental Regulation  Credit Hours: 3
This course deals with the purpose of federal, state, and local environmental law and its impact on South Florida and the larger world community. Reason for protection of the environment, compliance with legislation, and the concept of due diligence are emphasized. Extensive use of the case studies approach will be used to illustrate the application of law.

EVR2930 Environmental Science Seminar  Credit Hours: 1
Selected current topics in environmental science and related subjects are discussed.

EVR2949 CO OP Work Experience  Credit Hours: 3
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer.

EVS2893C Environmental Sampling & Analysis  Credit Hours: 5
This course provides an introduction to EPA and DEP-approved methods for the collection and analysis of environmental samples. The laboratory is integrated with class theory. Topics include; sampling of water, soils, sediments and hazardous waste; application of field and laboratory-based analytical methods; documentation procedures; method validation including generation of precision, accuracy, and detection limits; writing comprehensive and project-specific quality assurance plans.

FAS4202C BIOLOGY OF FISH  Credit Hours: 3
The general biology of fish, with emphasis on trends in their evolution, integrative and sensory biology, physiology, feeding ecology, reproduction, growth and population dynamics as they relate to fisheries.

FES2010 Introduction to Emergency Management  Credit Hours: 3
A study of Emergency Management, including the current organizational structure/procedures of emergency management programs, the 4 phases of emergency management: mitigation, preparedness, response and recovery, and past and current emergency management systems.

FFP1000 Introduction to Fire Science  Credit Hours: 3
This introductory course will examine the evolution of the modern fire department, chemistry and physics of fire, fire hazard properties of materials; combustion; theory of fire control; importance of fire protection; public fire defenses; and other materials pertinent to fire service.

FFP1505 Fire Prevention Practices  Credit Hours: 3
Fundamentals of fire prevention are introduced with examination of fire causes and effects. The function of fire prevention bureaus, enabling legislation regulations and standards are discussed. Additional areas of study include the inspection process, fire code enforcement, local decisions, fire investigations, records and reports.

FFP1510 Codes & Standards  Credit Hours: 3
Review of specific requirements of codes and standards that have a direct influence on life safety in both new and
existing structures. Study includes discussion on the requirements for property protection.

**FFP1540 Private Fire Protection Systems I**  
Credit Hours: 3  
This course examines requirements for and testing of fire sprinkler and standpipe systems, chemical systems, detection and alarm systems.

**FFP1740 Fire Service Course Delivery**  
Credit Hours: 3  
Examines the instructor's role and responsibility in the teaching/learning process, introduction of teaching/learning styles, job task analysis, learning objectives, lesson planning and development, testing and evaluation, and administration of programs.

**FFP1793 Fire & Life Safety Educator I**  
Credit Hours: 3  
This course is designed to provide the public educator with the knowledge and skills to successfully perform as a fire and life safety educator. Case study topics include fire behavior, community assessment, injury prevention and juvenile fire-setting. The student will also develop presentation skills and learn how to formulate public education programs. This course meets state and national certification criteria for Fire and Life Safety Education, Level I.

**FFP1810 Firefighting Tactics & Strategy**  
Credit Hours: 3  
A study of tactical considerations and strategic options employed in the extinguishment of fires; Pre-planning and company level field operations will be analyzed with application of course concepts.

**FFP1830 Introduction to Hazards**  
Credit Hours: 3  
An in-depth study of the details and dynamics of natural and man-made hazards. Includes methods and means to measure, monitor and predict the physical impact of hazards on society. Special emphasis on hazards that impact Florida.

**FFP2111 Fire Chemistry**  
Credit Hours: 3  
Study of the physical and chemical properties of matter, with a particular emphasis on hazardous materials, hydrocarbons, oxidation-reduction chemistry, and residuals of pyrolysis. Topics covered include atomic structure, the periodic table, chemical bonding, chemical measurement, stoichiometry, and the study of chemical properties according to group, class, and reactivity. Sample collection and analysis is included as a practical component of the course.

**FFP2120 Fire Service Building Construction**  
Credit Hours: 3  
Course examines objectives and criteria of South Florida building code requirements for various types of occupancies, classification by types of construction, building materials, fire resistant standards, egress, permits, inspections, and standards, and other pertinent material for building construction.

**FFP2301 Fire Hydraulics**  
Credit Hours: 3  
Study of the physical properties of water used in fire protection. Basic hydraulic measuring units, facts, theories and formulas for problem solving.

**FFP2302 Fire Apparatus & Procedures**  
Credit Hours: 3  
This course offers study in evolution of fire apparatus; apparatus construction; pumps and pump accessories; pumping procedures; pump tests; trouble shooting; aerial ladders; aerial platforms; maintenance; driving fire apparatus.

**FFP2521 Construction Documents & Plans Review**  
Credit Hours: 3  
Students will review actual building plans and apply codes, standards and inspection techniques, to find errors and omissions. Students shall make appropriate corrections according to the code, and with preferences identified.

**FFP2541 Private Fire Protection Systems II**  
Credit Hours: 3
This course is an in-depth discussion of pre-engineered and portable systems, extinguishing agents, inspection procedures for code compliance and enforcement, and alarm systems. Contemporary systems are examined through case studies. This course is part of the Fire Inspector II State Certification.

FFP2610 Origin & Cause
A study of the arson and investigation problems examining facts and figures, motives and the role of fire department in arson suppression. Reviewing chemistry of explosions. Analyzing the juvenile arson problem. Analysis of urban fires, automobile fires, and reports, interrogation and presenting the arson case in the court-room.

FFP2630 Latent Investigation
Study of proper crime scene and fire scene investigation including conduct of appropriate documentation, collection and preservation of evidence, and the qualitative analysis of data to determine whether or not prosecution for the crime of arson is indicated. Special situations/problems will be examined including the arsonist's use of explosive and hazardous materials. Motives for arson will be discussed, and distinctions made between civil and criminal situations.

FFP2670 Legal Issues for Investigators
Study of the applicable laws and attending legal considerations associated with the successful prosecution of arson cases. Specific areas of concentration include witness statements, interviews, interrogations, depositions, and written reports. Expert qualification and effective courtroom testimony will be examined and evaluated. Distinctions will be discussed between civil and criminal situations. Students will be required to prepare a case for prosecution from evidence gathered and/or provided in class, and present their testimony in a mock trial activity.

FFP2706 Public Information Officer
This course prepares the student to serve effectively as an organizational spokesperson, according to current practices in the profession of public relations and numerous examples from the fire service. Particular emphasis will be placed on case studies in crisis communications and the role of the Public Information Officer's role in the Incident Command System. This course is part of the Fire Officer II and Fire Inspector II State Certification programs.

FFP2720 Company Officer
Study of superior subordinate relationships, motivation, leadership, morale, discipline, work planning and other supervisory responsibilities related to fire dept. operations.

FFP2741 Fire Service Course Design
Course covers the principles of effective curriculum design in the Fire Service field. It stresses the principles of adult and student-centered learning. Students learn to design Courses and units that address learning, performance, and behavioral objectives as related to Fire Science.

FFP2770 Ethical & Legal Issues for the Fire Service
This course deals with the entire spectrum of issues facing today's fire service leaders. Topics include: labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making are used. Case studies are used to explore contemporary issues. Students will be notified prior to the class. Part of Fire Officer II.

FFP2780 Fire Department Administration
An introduction into managing fire services and community fire protection programs. Relationships between the insurance industry, the professional community, contemporary management and planning concepts are analyzed.

FFP2800 Emergency Management Public Education Programs
The design, development and delivery of emergency disaster safety and informational programs to the public, including targeting program audiences and evaluating the effectiveness of the programs are analyzed.

FFP2811 Firefighting Tactics & Strategy II
This course applies the basic principles learned in FFP1400 to specific fire problems, e.g., churches, flammable gases
and liquids, lumberyards, department stores, residential, supermarkets, and warehouses. Included are additional pointers on solving these problems and those of a miscellaneous nature; also command responsibilities on the fire ground.

**FFP2831 Hazard Planning & Mitigation**  
Credit Hours: 3  
An examination of how to develop programs that will reduce losses from future disasters, emergencies and other extreme events caused by natural and man-made hazards.

**FFP2840 Disaster Response & Recovery**  
Credit Hours: 3  
This course teaches all aspects of disaster operations with an emphasis on disaster response and recovery. Tactics, techniques and procedures for meeting the needs of disaster victims, providing mass care, and organizing and maintaining response operation.

**FFP2841 Emergency Planning for Business & Industry**  
Credit Hours: 3  
A study of the contingency planning process of emergency/disaster preparedness in the corporate world, including a step-by-step approach to emergency planning, response and recovery for companies of all sizes.

**FIL1030 Film History**  
Credit Hours: 3  
In this introductory course, students will learn the history of cinema in the United States and abroad, starting from 1895 to the present. The development of filmmaking technologies and storytelling conventions are analyzed and evaluated in their historical, cultural and stylistic contexts.

**FIL1100C Screenwriting Fundamentals**  
Credit Hours: 3  
The course is a workshop in which students will develop their own original stories, while learning basic narrative structure for feature length screenplays. Student will also learn to break down and analyze popular screenplays.

**FIL1131C Screenwriting Workshop**  
Credit Hours: 3  
The course is a workshop in which students will develop their own original stories, while learning advanced structure and formatting for complex short narrative screenplays.

**FIL1420C Introduction to Filmmaking**  
Credit Hours: 3  
Provides a basic understanding of digital film production technology, equipment operation, terminology, and techniques, as well basic industry positions, procedures and protocols in the production of several short narrative motion pictures.

**FIL1456C Film Production Design**  
Credit Hours: 3  
In this course, students will learn basics of production design and its importance in film. Production design concepts and techniques will be developed and applied in class.

**FIL1552C Film Editing Fundamentals**  
Credit Hours: 3  
Basic theory and practice of nonlinear editing for narrative motion pictures using industry motion picture editing software.

**FIL2000 Film Appreciation**  
Credit Hours: 3  
This course is designed to provide an introduction to film as an art form, cultural product and social artifact. It will include the understanding of basic analytical and technical forms, concepts, issues and development of critical skills. It will also include the history, development, theory and criticism of film art, as well as the basic principles of film making and film production. This is a writing credit course and an International/Intercultural competency course. Students must earn a minimum grade of a C to meet the requirements of the Gordon Rule for writing.

**FIL2432C Film 3: Fiction Filmmaking**  
Credit Hours: 4
Building on the basic concepts of Film Productions I and II, students continue to develop an understanding of professional digital film production with the addition of basic lighting and sound for cinematic storytelling. Industry positions, procedures and protocols will be emphasized during the production of several short narrative motion pictures.

**FIL2438C Nonfiction Filmmaking**  
Credit Hours: 3  
Building on the concepts of Film Production I, students continue to develop an understanding of professional digital film production with emphasis on documentary production. Industry positions, procedures and protocols will be emphasized during the production of several short motion pictures.

**FIL2473C Visual Effects Fundamentals**  
Credit Hours: 3  
This course will introduce students to the basic theory and techniques used in digital visual effects for film. Topics covered will include Text Effects, 3-D Effects with Motion, Image Compositing and Green-Screen compositing.

**FIL2515C Film 4: Producing the Short Film**  
Credit Hours: 4  
This course emphasizes preproduction and production protocols, direction of actors, rehearsals, camera staging, visual effects, scene coverage and shooting for continuity. Working in teams, the students learn to apply the knowledge acquired in previous film Courses to the production of short narrative sound films of portfolio quality.

**FIL2537C Sound Design Fundamentals**  
Credit Hours: 3  
This course will introduce students to the basic theory and techniques used in sound design for film and video. Topics covered will include sound recording and the use of sound editing software to execute dialogue replacement, effects, sweetening, and foley. Students will create a mix of the three stems of sound design: Dialogue, Music, and Sound Effects.

**FIL2572C Post Production Workshop**  
Credit Hours: 3  
Students will employ advanced theory, techniques and procedures used in editing, sound design, visual effects and color correction for film using industry-standard software.

**FIL2611 Film Business & Entrepreneurship**  
Credit Hours: 3  
In this course, students will learn the business aspect of filmmaking, including creating a business plan that involves marketing, distribution and exhibition. Legal aspects of filmmaking are also covered.

**FIL2647 Film Producing & Production Management**  
Credit Hours: 3  
This course will introduce students to the theory and practice of producing and managing picture productions, from preproduction to post, including the management of above-the-line talent. Topics covered will include budgeting, script breakdown, scheduling, location scouting, and crew procurement, among others.

**FIL2930 Special Topics in Film & Video**  
Credit Hours: 3  
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester.

**FIL2945 Film Internship**  
Variable Credit Course (1-3 Credit Hours)  
Students will learn to apply the various skills gained throughout the program in a semester-long immersion at an established film entertainment company for a minimum of 100 hours. The student will produce a portfolio of work and a resume.

**FIN2051 Finance of International Trade**  
Credit Hours: 3  
This course provides a general survey of international trade. Topics studied include transportation modes, cargo insurance and the various special terms of sale used in overseas transactions. Also covered are import/export, foreign exchange, pricing and quotations; import/export documentation and procedures; documentary credits, international payments and collections; bank financing sources for international trade and alternative financing techniques.
FIN2100 Personal Finance  Credit Hours: 3
This course provides a survey of the areas of personal economic problems with which all individuals must contend. Course content guides each person towards receiving favorable results in the following areas: buying on credit, borrowing money, using bank services, and investing savings; selecting from various types of insurance coverage; home ownership vs. renting; obtaining investment information, investing in stocks and bonds; income taxes; Social Security; Medicare, retirement planning and annuities; and estate planning, wills, and trusts.

FIN3400 Principles of Financial Management  Credit Hours: 3
This is an introductory course in managerial finance in which the student should attain a clear, basic understanding of the fundamentals of finance and their associations to the decision-making framework faced by a financial manager. Topics include time value of money risk and rates of return, asset valuation, financial planning and forecasting, working capital management and international financial management.

FIN3403 Managerial Finance  Credit Hours: 3
This is an introductory course in managerial finance in which students gain a clear, basic understanding of the fundamentals of finance and its related decision-making. The course will cover all elements of organizational finance from budget development to finance management, and from procurement to accounting. Topics include: how financial structure and operational efficiency affect a firm; alternative methods of raising funds; concepts of equity versus borrowed funds; financial planning and forecasting, working capital management; international financial management and other topics relevant to the acquisition, financing, and management of business assets and business decision-making, with emphasis on doing business in a multi-national environment.

FOS2201 Food Service Sanitation & Safety  Credit Hours: 3
This course provides the student with the basic concepts of food microbiology and food borne diseases. Standards enforced by food regulatory agencies will be identified. All information will lead to the application of measures to prevent food borne illness. This course includes a comprehensive exam leading to national certification.

FRE1000 Elementary French Conversation  Credit Hours: 3
A custom made course for those residents in the community who require a cursory knowledge of French to help them communicate with French speaking people.

FRE1120 Beginning French I  Credit Hours: 4
Fundamentals of speaking, listening-comprehension, reading, writing, and Francophone culture. Classroom practice and exercises supplemented by laboratory and/or multi-media designed to develop communicative competence and cultural sensitivity. Student expected to continue further implementation and expansion of their proficiencies in FRE1121 and FRE2220. Students are encouraged to study abroad.

FRE1121 Beginning French II  Credit Hours: 4
A continuation of FRE1120 which further develops the basic skills in speaking, listening-comprehension, reading, writing, and appreciation of Francophone culture. Classroom practice and exercises supplemented by laboratory and/or multi-media activities designed to develop and enhance communicative competence and cultural sensitivity.

FRE2220 Intermediate French I  Credit Hours: 4
This course is a continuation of FRE1121. This course further develops competencies in listening and reading comprehension, speaking and writing. Cultural components are embedded through the introduction of complex grammatical and idiomatic structures. Classroom practice and exercise are supplemented by laboratory and multimedia activities designed to develop and enhance communicative competence and cultural sensitivity. This course includes compositions and readings in francophone prose and poetry. Special fees charged. This course meets the foreign language requirement and it is an International/Intercultural competency course.

FSS1203C Quantity of Food Production I  Credit Hours: 3
Students will acquire the fundamental concepts, skills and techniques involved in the management of resources, use of recipes, use and care of equipment, and evaluation of food products. Special emphasis is given to practical
demonstrations in breakfast cookery, salads, dressings, cold sauces, sandwiches, and safety and sanitation principles. Students must successfully pass written and practical cooking examination covering a variety of techniques and procedures.

**FSS1240C Classical Cuisine**  
Credit Hours: 3  
This course provides the professional culinary student with new menu items and terminology. It sets and applies standards to hot/cold hors d'oeuvres, appetizers, large and small dinner parties, and pastry products. The students observe preparation skills, write recipes, practice correct serving techniques, and taste the prepared food.

**FSS1246C Baking & Pastries I**  
Credit Hours: 3  
Students will acquire knowledge of the composition and properties of baking ingredients. They will utilize the proper equipment and tools, and standardized recipes to prepare yeast breads, rolls, pastries, and cakes in the food service laboratory. The instructor will evaluate the products prepared based on established food service standards.

**FSS1284 Catering**  
Credit Hours: 3  
This course provides a survey of catering operations. Topics covered include the preparation of a menu, estimating cost and food quantities, planning the room arrangement, the setup of buffet and service tables, and the performance of services. In addition, the allocation of time to prepare, transport, and setup the equipment and food for a catered affair are studied.

**FSS2204C Quantity of Food Production II**  
Credit Hours: 3  
This course will enable students to learn and execute various methods preparing vegetable, starch, meat, fish, and poultry cookery, including the basic cooking techniques: sautéing, roasting, poaching, braising and frying.

**FSS2205C Quantity of Food Production III**  
Credit Hours: 3  
Students will focus on the knowledge and preparation of job descriptions. Students will utilize all commonly accepted methods of recruiting a successful staff. Menu selection, staffing, and balance will be studied. The course also emphasizes safety and sanitation procedures. Students will learn about common problems in hiring and supervising employees.

**FSS2242C International Cuisine**  
Credit Hours: 3  
This course covers international cookery as it applies to modern menu use and selection. It includes preparation of cold buffet, entree, dinner accompaniment, and flambe dessert. The students observe preparation skills, write recipes, practice correct serving techniques, and taste the prepared food.

**FSS2247C Baking & Pastries II**  
Credit Hours: 3  
Students will continue to build knowledge of the composition and properties of baking ingredients. They will utilize the proper equipment and tools, and standardized recipes to prepare yeast breads, rolls, pastries, and cakes in the food service laboratory. The instructor will evaluate the products prepared based on established food service standards.

**FSS2248C Garde Manger**  
Credit Hours: 3  
Students will acquire knowledge and demonstrate skills in the cold foods area of the kitchen. The key topics will include sausages, pats, terrines, cured and smoked foods, cheese making, hors d'oeuvres, appetizers, condiments, garnishing and ice carving.

**FSS2251 Food & Beverage Management**  
Credit Hours: 3  
Covers the principles and procedures involved in an effective food and beverage control system, including standards determination, the operating budget, cost-volume-profit analysis, income and cost control, menu pricing, theft prevention, labor cost control, and computer applications.

**FSS2500 Food Service Costing & Controls**  
Credit Hours: 3  
This course provides a cost managing approach to the study of food and labor controls. Students examine the relationship of food and labor costs to selling price; cost control procedures for recipes and menus; pre-cost and pre-
control techniques; the preparation and utilization of management reports. A review of mathematics and its application to practical problems is covered. Emphasis is placed on the utilization of controls as a tool of management.

**GEA2000 World Geography**  
Regional geographical characteristics, area relationships and major regional internal as well as interactive problems will be analyzed. The theme of this course is to impart geographic knowledge at the world regional level, then explain how these factors create global contrasts. Special emphasis will be placed on how the world has become more interdependent as complex economic systems have evolved and become more specialized. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**GEA2030 Geography of the Eastern World**  
A regional survey of the human/cultural and physical/environmental aspects of the non-western world including the following regions: North Africa & SW Asia, Sub-Saharan Africa, South Asia, Southeast Asia, East Asia, and the Pacific Island Realm. The characteristics and special problems of each region will be analyzed from a geographical perspective in order to understand global diversity and the forces and issues that help shape the world. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**GEA2040 Geography of the Western World**  
A regional survey of the human/cultural and physical/environmental aspects of the western world including the following regions: Europe, Russia and the C.I.S., Anglo America, Middle America, South America, and Australia. The characteristics and special problems of each region will be analyzed from a geographical perspective in order to understand global diversity and the forces and issues that help shape the world. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**GEB2011 Introduction to Business**  
This course provides a basic study of business activity and how it relates to our economic society. Topics covered include how businesses are owned, organized, managed and controlled. Course content emphasizes business vocabulary, areas of business specialization, and career opportunities.

**GEB2112 Entrepreneurship**  
This course explores the process, skills and attitudes that enables individuals to recognize and seize opportunities, converting them into workable ideas capable of competing for implementation in today’s economy. It identifies and reviews important business concepts such as; value creation, products/services, business plans, marketing plans, selling, advertising, human resources, management policies, financial statements, accounting systems, capital management, information technologies, and risk management. It also explores ethical, legal and tax issues associated with business creation and operations.

**GEB2430 Business Ethics**  
A brief practical approach to recognizing, understanding and solving ethical problems confronting today's business people and organizations. Students will review the historical development of ethics, examine a variety of ethical dilemmas, and will practice resolving them through ethical reasoning. Reference to statutory and professional codes will be addressed. Logical and responsible decision-making will be stressed with individual, organizational and societal needs being addressed.

**GEB2949 CO OP Work Experience**  
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer.

**GEB2955 International Current Business Practices**  
Credit Hours: 3
Upon successful completion of this course, students should have a broad conceptual viewpoint of inter-national business activity in areas such as finance, marketing, production and manufacturing. This course covers the nature and purpose of business between nations as well as the concepts of the multinational corporation and its importance in the world marketplace. Business concepts of other nations are studied through actual visits to foreign business enterprises. Emphasis is given to the differences in business policies between countries and their relationship to business activity.

**GEB3213 Business Writing**  
Credit Hours: 3  
This course introduces students to communication skills necessary to excel in business environments. Areas include written, oral, non-verbal, and interpersonal communication with emphasis on business documents, oral presentations, social media, job search, and cross-cultural communication.

**GEB4131 Entrepreneurship & Small Business Management**  
Credit Hours: 3  
A comprehensive coverage of the various tools, documents, and subject materials utilized to start and maintain a small business. This includes the entrepreneurial perspective (challenges, characteristics, self-assessment), starting a new venture/developing the business idea, developing the business/marketing/financial organizational plans, financing the new venture, managing the new venture, and coverage of special issues such as legal, franchising, and international entrepreneurship.

**GEO1000 Introduction to Geography**  
Credit Hours: 3  
This course is a study of the geographical patterns of both human and physical phenomenon and the interaction between humans and their environment. Through readings in the text and/or supplemental sources and via class lectures, activities and discussions analysis will target the earth's physical systems including landforms, hydrosphere, and climates; human systems such as culture, population and economic/urban development; as well as human impact on the world's natural resources. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**GEO2200 Physical Geography**  
Credit Hours: 3  
This course serves as an introduction to the manner in which natural systems function at global and regional scales. The course uses a geographical perspective to analyze landforms, climate, the water cycle, and the biosphere, examining spatial relationships and regional variations and addressing spatial patterns of human activity as related to environmental phenomenon.

**GEO2370 Conservation of Natural Resources**  
Credit Hours: 3  
A survey of the use and mismanagement of natural resources within the environment, including problems of development, pollution, biotic systems, population, resource depletion and technology. Special emphasis will be placed upon the spatial/geographical manifestation of conservation issues. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.
GEO2420 Introduction to Human/Cultural Geography  
This course will introduce students to geographical concepts as applied in human/cultural issues and problems of the world today. Emphasis will be placed on tensions between globalization and human diversity. The systematic approach will offer theories and techniques developed by geographers that assist in understanding both human-cultural interaction and human-environmental interaction. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

GER1120 Beginning German I  
Fundamentals of speaking, listening-comprehension reading and writing in German are covered. Introduction to the German-speaking world, German language and culture. Classroom practice supported by on-line, laboratory and/or multi-media exercises, designed to develop student proficiency and confidence. Students are expected to further their skills in GER1121 and GER2220.

GER1121 Beginning German II  
This course further develops speaking, listening comprehension, reading and writing in German. Students become more acquainted with the German speaking world, German language and culture. Classroom practice supported by on-line, laboratory and/or multi-media exercises, designed to develop student proficiency and confidence. Students are expected to further their skills in GER2220.

GER1170 German Study Travel  
A course designed for students who wish to combine the study of German with subsequent travel to a German speaking region.

GEY2621 Psychology of Aging  
This course examines the psychological, physical, and social aspects of the aging process. In addition to introducing students to aging, this course also fosters personal reflection on values attitudes towards aging and the elderly. This is designated diversity-dedicated course.

GER2220 Intermediate German I  
Continued practice of speaking, listening comprehension, reading and writing in German. Students acquire more in-depth knowledge about the German speaking world, German language and culture. Classroom practice is supported by online, laboratory and/or multi-media exercises, designed to develop student proficiency and confidence. Student are expected to further their skills by studying abroad. This course meets the foreign language competency and is an International/Intercultural competency course.

GIS1000 Mapping Fundamentals  
Mapping Fundamentals introduces students to the design, compilation, and construction of thematic maps. Topics include map projections, page layout, scale change and generalization, lettering, symbols, color usage and reproduction. The major types of thematic mapping (proportional symbols, isopleths, and choropleths) are studied. Exercises utilizing graphics software (Adobe Illustrator 7.0) are designed to introduce students to computer assisted cartography. Laboratory assignments provide an opportunity to apply cartographic theory in a wide range of mapping exercises.

GIS1030 Remote Sensing & Applications  
This course introduces basic concepts and fundamentals of remote sensing, image processing, and the Global Positioning System (GPS). The principles and processes involved in air photo interpretation will be reviewed and examined. Image processing techniques will be reviewed from practical and mathematical points of view. The course is intended to provide the student with the background information necessary to successfully use remotely sensed imagery and GPS in conjunction with GIS technology.

GIS1040C Introduction to Geographic Information Systems I  
The intent of this course is to provide the student with a detailed introduction in Geographic Information Systems (GIS) and support this information with laboratory activities. The course will cover all working knowledge of the
theory aspects of geographic information systems including data collection, preprocessing, data management and data analysis as well as an introduction to the application of these systems.
GIS1042C Introduction to Geographic Information Systems II Credit Hours: 3
This course will build upon the student's fundamental knowledge of GIS gained in the prerequisite course titled "Introduction to Geographic Information Systems I". The student will learn how to implement geographic concepts in GIS systems. The course will provide the student with the fundamental of computing and information science systems and cartography. It will introduce the student to the theory and practice of computer-aided cartography. In addition, the student will delve more deeply into data representation, manipulation and presentation.

GIS1047C Applications of Geographic Information Systems Credit Hours: 3
A combined lecture and laboratory course in which students will draw upon the principles learned in GIS I and GIS II to increase/prepare skills and apply them to individual and/or group projects.

GIS2040C Introduction to Geographic Information Systems I Credit Hours: 4
The intent of this course is to provide the student with a detailed introduction in geographic information systems (GIS) and support this information with laboratory activities. The course will cover all working knowledge of the theory aspects of geographic information systems including data collection, preprocessing, data management and data analysis as well as an introduction to the application of these systems. Prerequisite: knowledge of Windows operating system.

GIS2042C Introduction to Geographic Information Credit Hours: 3
This course will build upon the student's fundamental knowledge of GIS gained in the prerequisite course titled "Introduction to Geographic Information System I". The student will learn how to implement geographic concepts in GIS systems. The course will provide the student with the fundamental of computing and information science systems and cartography. It will introduce the student to the theory and practice of computer-aided cartography. In addition, the student will delve more deeply into data representation, manipulation and presentation.

GIS4301C Advanced Geographic Information Systems Credit Hours: 3
This is an advanced project-based course where the student will apply fundamental and intermediate concepts in geographic information systems (GIS) to a specific project utilizing GIS technology and industry standard software. Students should come prepared with a project topic, scope, goals and objectives, and data sources. An oral presentation of the project will be made at the completion of the course.

GLY1010 Physical Geology Credit Hours: 3
Study of geologic agents, minerals, rocks, structure, and land forms. The effects of geologic events upon life and human relations are discussed. Students registering in GLY1010 are strongly urged to register in the companion lab GYL1010L.

GLY1010L Physical Geology Laboratory Credit Hours: 1
Study of common rocks and minerals including their classification and origin and the interpretation of landforms through the study of geologic maps. One 2-hour laboratory weekly. Placement by Testing Department.

GLY1100 Historical Geology Credit Hours: 3
A study of the origin and evolution of the Earth and the history of life on our planet. The course encompasses the causes and effects geologic change and the evolution of life, and the role of plate tectonics on the geologic and biologic evolution of Earth. Emphasis is placed on how and why past geologic and biologic changes occurred. Interpretations of Earth's past history are also used to help explain current events and predict future trends. Field trips are optional.

GLY1100L Historical Geology Laboratory Credit Hours: 1
This course utilizes activities to interpret the earth's geologic history and augments the topics covered in GLY1100. These exercises include a review of rocks and minerals interpretation of maps and aerial photography using principles to determine the sequence geologic events, application of paleontological data, interpretation of depositional environments, stragraphic correlation, interpreting surface and subsurface structure, and pale geographic exercises.
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>GLY4203</td>
<td>Environmental Geology &amp; Lithospheric Processes</td>
<td>3</td>
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<td></td>
<td>A comprehensive study of the materials that make up the Earth's lithosphere, followed by addressing the linkage between surface and lithosphere geology and the Earth's physical environment. Emphasis is placed on recognizing geologically related environmental issues and the interactions between people and the Earth's physical environment.</td>
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<tr>
<td>GLY4731</td>
<td>Coastal &amp; Marine Science</td>
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<td></td>
<td>This course introduces students to physical, biological, and &quot;man caused&quot; processes that occur in the coastal environment. Marine forces that control sediment movement and morphology changes will be examined. These forces, acting on a coastal ocean environment are waves and currents with the latter being generated by waves, winds and/or tides. Together with biological processes and the active and passive action of humans from the Coastal and Marine Science. Topics to be covered include: tides, wave theory, wave and current measurements, wave hindcasting and forecasting, sediment transport, beaches and bars, sediment budget. The goal of the course is to make students aware of the most important physical and biological processes that act in the coastal environment and the role they play in shaping the coastline. After completion of the course students will be able to identify the most important relevant processes for a particular coastal environment (i.e., inner shelf, beach, tidal inlet, estuary), and apply quantitative formulations as related to an environmental and/or engineering study relevant to that environment.</td>
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<td>GLY4746</td>
<td>Global Environmental Change</td>
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<td>The Earth is viewed as a system of complexly linked, continuously changing, geologic, atmospheric, biologic, and chemical processes that are characteristic of a dynamic and evolving planet. These physical, chemical, and biologic changes (both natural and anthropogenic) are explored over a wide range of space and time scale.</td>
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<tr>
<td>GLY4825</td>
<td>Hydrogeology</td>
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<td>This course provides an introduction to the theory and principles of ground water flow as well as stream flow. Topics include the hydrologic equation, evapotranspiration, well drilling and testing, porosity and permeability, Darcy's law, confined and unconfined aquifers, water table maps, well logs, and hydrographs. An important aspect of the course is the geological control on groundwater. The movement of water from wells to regional settings are explored. The mathematical equations used to describe groundwater flow are examined. Commonly used methods for measuring aquifer properties are discussed. Additional topics such as water law, aquifer contamination, and aquifer management will be introduced. Salt Water intrusion in Biscayne, FL or other similar examples will be examined. This course examines fluid flow through porous materials and the mathematics used to interpret hydraulic test data.</td>
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<tr>
<td>GLY4825L</td>
<td>Hydrogeology Laboratory</td>
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<td>This course is designed to pair GLY4825. Students will learn to use instruments to determine physical, chemical, hydrologic and geologic factors that control the occurrence and dynamics of groundwater. Students will develop the ability to investigate groundwater systems and to solve simple problems in basic and applied hydrogeology.</td>
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<tr>
<td>GRA1110C</td>
<td>Applied Design 1</td>
<td>3</td>
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<td>An introduction to the theory, history and practice of graphic design that explores a graphic designer's role in today's marketplace through lectures, speakers and field trips. Students will survey industry job titles including layout artist, package designer, web designer, advertising and branding design, as well as the increasing role of user experience and social networking design. Students will research and present a detailed examination of one facet of the industry. The class will also address ethics, copyright, and sustainability as well as business practices and professional organizations.</td>
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<tr>
<td>GRA1144C</td>
<td>Web Publishing</td>
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<td>This course is a basic course in designing web pages, web site architecture and navigation. Students will be instructed in the most current applications used for production of web pages. Proper coding of the pages using current web tools, with consideration of various platforms, will be provided. A special emphasis will be placed on interactivity design and page layout, and proper use of typography and images for delivery on the Internet. The class is portfolio driven, training students to follow a business process for analyzing client needs, conducting research and developing a concept for production within a budget.</td>
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GRA1151C Illustration Design 1  Credit Hours: 3
This course addresses the concepts and techniques necessary to create computer-generated illustrations for use in print, web and multimedia applications. Students will work with software packages utilized by professional designers. Assignments include the creation of technical illustrations, business graphics (charts, maps, tables, and diagrams) and art for other applications. The class is portfolio driven, training students to follow a business process for analyzing client needs, conducting research and developing a concept for production within a budget.

GRA1201C Typographic Design  Credit Hours: 3
This course is an introduction to computerized typography. The emphasis is on the visual effects of type as a design and communication element. Students will form an understanding of the fundamental rules related to type design, such as kerning and leading. The primary focus of the instruction will be in how type is used in contemporary graphic design applications, but some practice in hand lettering will be included as well as a study of the how various type styles are designed. Also included is a study of font management, postscript, and handling of digital files. Students will solve a variety of problems commonly encountered in the production of a body of type for both print and electronic output.

GRA2121C Publication Design  Credit Hours: 3
This course introduces the student to principles governing page layout and the design of publications. The industry standard software will be used for the production of professional looking publications which may include magazines, newsletters, catalogs, newspapers, books, or annual reports. Topics covered include the basic principles of effective typography; the use of grids; integration of graphics and photos into publications; basic information design principles, working with spot, process color and separations, principles of page assembly and other methodologies to design and produce a variety of single and multi-page publications.

GRA2157C Illustration Design II  Credit Hours: 3
This advanced illustration class will expand the students' visual problem-solving vocabulary to include informational graphics, mapmaking and editorial illustration. Illustrations will use digital 2-D and 3-D solutions. In addition, students will incorporate natural material and construction into the process of illustration design. For informational graphics, students will research complex ideas and synthesize them into easily understood visual representations.

GRA2171C Brand & Ad Design  Credit Hours: 3
This course will introduce advertising and marketing principles. Students will apply design and technical skills introduced in foundation level classes. The focus will be on solving real world advertising and promotional problems, carrying projects from initial concept to final presentation of the product. Projects will satisfy the current industry client base which demands that a graphic artist conceive a given graphic idea for production in a variety of print outputs, as well as output for the Web, TV and multimedia. The class is portfolio driven, training students to follow a business process for analyzing client needs, conducting research and developing a concept for production within a budget.

GRA2180C Applied Design II  Credit Hours: 3
The student will apply all the knowledge acquired in previous Courses to this portfolio building class. Projects will cover the full spectrum of graphic design jobs, including advertising, identity systems, packaging, way finding systems, and site-specific design. The designer will produce examples to show potential clients and/or employers the range of their skills. Sustainable design ideals will employ, assess and communicated to the class with each project. The goal is to find the eco-friendliest design solutions while educating the client and meeting their needs.

GRA2185C Design Production  Credit Hours: 3
This course is an advanced level course that forms an integral part of the final skills needed to complete the Graphic Design Technology A.S. Degree requirements. It is intended to support the portfolio and internship Courses by providing practice in advanced concept formulation and art direction strategies and practical experience in production of their portfolio at a service bureau.
GRA2190C Introduction to Graphic Design  Credit Hours: 3
This course is an introduction to the theory, practice, materials, techniques, and production methods used in graphic arts, pointing out how various layout techniques lead to a printed piece. Intended for art majors who wish to pursue a BFA degree in graphic design or want to seek entry level employment.

GRA2191C Graphic Design II  Credit Hours: 3
Communication and creativity theory for graphic designers, featuring preparation of art for reproduction using the computer as a graphic design problem-solving tool, combining text, image and digital design. Intended for art majors who wish to pursue a BFA degree in Graphic Design or want to seek entry-level employment.

GRA2380C User Experience & Interface Design  Credit Hours: 3
This course provides students with a general overview of User Experience Design ("UX") and User Interface Design ("UI"), paying special attention to mobile usage contexts and building a career in the field. By identifying the user’s needs and mapping out the most efficient pathways to their goals the designer will use color, typography, iconography, photography and special relationships to make a user interface that expedites the journey.

GRA2403 Principles of Project Management  Credit Hours: 3
Students in this course will gain a comprehensive understanding of the skills required of project managers. This includes software presentation training, instruction in monitoring and controlling projects, procurement planning techniques, and an introduction to using project management software.

GRA2425C Portfolio & Business of Design  Credit Hours: 4
Students will collect their work into a print and web portfolio that represents their mastery of the skills and standards of the graphic design program. This capstone class will include business practices, ethics, contracts and copyright issues. Issues of sustainability and environmental sensitivity will be stressed.

GRA2754C Web Design II  Credit Hours: 3
Extends students' expertise in web design, this class will add advanced CSS, HTML5, Flash, search engine optimization, content management system and integration, as well as usability assessment and interface design. The student will also integrate social media, podcasting and blogging into web development.

GRA2810C SEO & Social Media Design  Credit Hours: 3
Design, analyze and create marketing strategies for brands and their presence on the Internet. Students will use Google Analytics, and other SEO tools to increase the ranking of their client companies. Student will also strategize the use of Facebook, Twitter, Instagram, and any other social media platforms to present and interact with customers to improve the company’s perceptions as valued brands.

GRA2940C Graphic Design Internship  Credit Hours: 3
This course is a culmination of the Graphic Design two years A.S. Program. Students will learn the necessary business protocol and job interviewing skills that will place them in an internship situation. The intern will work in a studio setting, e.g., advertising agency, graphic design department of a large company, commercial printing business, etc. The experience will involve all duties usually associated with the current graphic design profession. Interns are expected to complete project assignments from start to finish with minimal guidance from the sponsoring entity/establishment.

HBR1120 Beginning Hebrew I  Credit Hours: 4
Covers fundamentals of speaking & understanding reading & writing. Classroom practice & exercises supplemented by language and laboratory sessions are designed to develop confidence and a basic proficiency in Modern Hebrew.

HBR1121 Beginning Hebrew II  Credit Hours: 4
Continuation of HBR1120. Further development of the basic language skills already mastered. Classroom discussions and practice are supplemented by exercises and multi-media activities designed to develop and enhance
communication.
HBR2220 Intermediate Hebrew I  
Credit Hours: 4
HBR2220 advances the groundwork laid in HBR1120 and HBR1121. Classroom discussions and practice are supplemented by exercises and multi-media activities designed to develop and enhance communication and cultural awareness. Students will continue to develop their knowledge of Hebrew syntax, grammar, and morphology. This course is predominantly taught in Hebrew with activities triggered by exposure to ancient texts, sacred texts, and modern literature which are supplemented by audio-visual immersion in the language and culture. This course meets the foreign language competency, and it is an international/intercultural competency course.

HCP0001 Health Careers Core Curriculum  
Clock Hours: 75.00
The Health Careers Core Curriculum course presents basic knowledge & skills for students majoring in a health science degree program. The course introduces students to a health care delivery system, the health occupations, and teaches basic medical and employability skills.

HFT1050 Introduction to Tourism Industries Administration  
Credit Hours: 3
This course provides a survey of the history, organization, problems, opportunities and future trends in the areas which comprise the travel and tourism industries. Emphasis is placed on the economic benefits and social implications of tourism. This course is beneficial to the purchaser of tourism services as well as the marketer.

HFT1210 Supervisory Development  
Credit Hours: 3
This course provides training on the art of supervising employees and the development of sound relations with other departments. It covers methods of controlling costs, development of cost consciousness, cost improvements, techniques in the supervision of employees, and developing sound relations with other departments.

HFT1941 Operations & Service Practicum  
Credit Hours: 3
This course requires practical work experience or participation in formalized internship program in related disciplines in an approved segment of the hospitality/restaurant/travel industries and is coordinated with a weekly seminar. Faculty makes regular appraisals of the learning progress through on-site visitations and consultation with supervisors. Emphasis is placed on how the job relates to the satisfaction of customer needs. In addition, the essence of the service transaction offered by the organization is analyzed, including both the tangible and intangible components.

HFT2220 Organization & Personnel Management  
Credit Hours: 3
This course covers the organization, supervision and direction of operations in the hospitality/ restaurant/travel industries. It analyzes the internal organizational structure and its administrative roles and functions. The course considers techniques of employee training, promotions, job specifications, discipline and morale. The course borrows from the behavioral sciences by emphasizing the human dimensions of management.

HFT2250 Hotel Management  
Credit Hours: 3
This course provides a study of the growth and progress of the hotel industry and how hotels are developed, organized, financed and operated.

HFT2410 Front Office Systems & Procedures  
Credit Hours: 3
This course provides basic training in front office procedures, and focuses on the rooms division of a hotel: front office, housekeeping, guest service, engineering, and security/loss prevention.

HFT2460 Financial Management  
Credit Hours: 3
A study of accounting systems for the hospitality/restaurant/travel industries with emphasis on operating statistics and financial reports. The utilization of financial statements by management is studied.

HFT2500 Marketing  
Credit Hours: 3
This course emphasizes how to sell and promote the services the hospitality/restaurant/travel industries offer guests. It covers the development of business through personal selling, media advertising and publicity. In addition, the operations of a sales and convention department are studied.
HFT2511 Convention & Group Business Marketing Management  
This course covers the functions of the convention organizer and tour wholesaler in relation to the suppliers of travel and hospitality services. The responsibilities of each organization in the marketing of facilities and activities to organizers, retailers, and/or consumers are emphasized.

HFT2600 Hospitality Law  
This course provides a study of the nature and function of our legal system as applied to hospitality, restaurant and travel operations. Operator/guest relationships, contracts, torts, civil rights and insurable risks are emphasized.

HFT2721 Travel Agency Management & Operations  
This course provides a study of the nature and function of our legal system as applied to hospitality, restaurant and travel operations. Operator/guest relationships, contracts, torts, civil rights and insurable risks are emphasized.

HFT2730 Tour Packaging  
This course provides a study of how to create, develop and sell package tours. Methods of customizing tours through the proper matching of destinations with market segments are covered.

HFT2942 Management & Control Practicum  
This course requires practical work experience or participation in a formalized internship program in related disciplines in an approved segment of the hospitality/restaurant/travel industries and is coordinated with a weekly seminar. Faculty make regular appraisals of the learning progress through on-site visitations and consultations with supervisors. Emphasis is placed on human relations, motivational techniques and management styles relating to the control of employees, money, and material as they are used to satisfy customer needs.

HIM1000 Intro to Health Information Technology Management  
This 3 Credit course is the initial and introductory course to the health information technology program. This course introduces the student to learning technologies, learning styles, and oral competencies to enhance their degree of success entering the program. The course continues by introducing the student to the program and the Health Information Management professional. The student will also learn about the protected health record, healthcare delivery systems, ethical standards related to coding and protected health records, functions within the traditional health information management department.

HIM1110 Health Data Concepts  
This course provides an introduction to the basic concepts and techniques for managing and maintaining health record systems. Topics include: record content, format and uses of healthcare data, record systems, storage and retrieval, quantitative analysis of health data, forms design and control, release of information, function of indexes and registers, accreditation, certification and licensure standards applicable to healthcare facilities. Through the Virtual Healthcare Systems Lab, students will be given access to work on a variety of healthcare electronic system enhancing their technology skills and knowledge such as: Athens/Cerner Electronic Health Records, QuadraMed MPI QuadraMed Smart ID, QuadraMed Encoder, and McKesson Horizons. Students will be given the opportunity to utilize and practice with current software packages common to the industry.

HIM1110L Health Data Concepts Laboratory  
This course provides an introduction to the basic concepts and techniques for managing and maintaining health record systems. Through the Virtual Healthcare Systems Lab, students will be given access to work on a variety of healthcare electronic system enhancing their technology skills and knowledge such as: Athens/Cerner Electronic Health Records, QuadraMed Smart ID, QuadraMed Encoder, and McKesson Horizons. Students will be given the opportunity to utilize and practice with current software packages common to the industry.

HIM1253 Coding I  
This coding course is designed to provide an introduction into basic ICD coding and coding guidelines. The course
will focus on defining basic coding definitions, review of coding guidelines, introduction to billing methodology and application of codes to specific basic coding assignments using ICD.
HIM1253L Coding I Laboratory  Credit Hours: 1
This Laboratory course provides HIM students an opportunity to apply basic concepts and techniques for ICD-9-CM coding using actual patient records and simulated patient records; both paper and electronic format from different treatment venues. Students will be guided through the practice coding by an experienced coding instructor with a detail analysis of correct coding technique. Students will be able to assess their own level of proficiency and access assistance in areas of identified coding weaknesses. Students will be introduced to encoding systems: 3M and QuadraMed.

HIM1260 Reimbursement Methodology  Credit Hours: 2
This course examines the complex financial systems within today's healthcare environment and provides an understanding of the basics of health insurance and public funded programs, managed care contracting and how services are paid. In addition to the step by step details about how each payment system functions, a brief historical review is also provided the student for a greater understanding of the impact has had on all stakeholders. This course will include a review of billing forms, different prospective payment systems and a discussion of claims management.

HIM1800 Professional Practice Experience: Basic  Credit Hours: 1
This is an introductory level course giving the students their initial supervised Professional Practice experience in the health information management department. Emphasis is on record assembly, analysis, filing, admission and discharge procedures. Basic doing will be addressed. Upon completion, the student shall have an understanding of the daily functional operations of a health information management department. Each student will be responsible for completion of a Professional Practice IWorkbook.

HIM2012 Health Records Law  Credit Hours: 3
This course focuses on the impact of legal and ethical issues in health information management. Topics include an overview of: the branches of government; tort law; confidentiality and release of information; subpoenaed information; record retention and security; information consent; liability; patient rights; negligence and malpractice; and ethics. Upon completion, students should be able to comply with legal requirements and be aware of legislative and regulatory trends.

HIM2112C Electronic Medical Record & Technology  Credit Hours: 3
This course will review the history of the electronic health record and current trends in healthcare information applications such as clinical information systems, administrative information systems, and management support systems. Students will explore the transition from a paper-based health record to an electronic health record and associated issues.

HIM2214 Health Statistics  Credit Hours: 2
This hands-on Laboratory course covers the collection, compilation, analysis, verification and display of healthcare statistics. Topics include: the uses for statistics, basic statistical principles, commonly computed rates, vital health statistics, uniform reporting requirements, data display and the role of the HIM department.

HIM2232 Coding II  Credit Hours: 2
This coding course is designed to build onto the HIM1253 Coding I course by enhancing the student’s quality of coding and understanding of sequencing for ICD-10-CM. The student will be introduced to basic CPT coding using both a manual system and automated encoder. Introduction to DRG logic, APC’s, RBRVS, PPS as well as Coding Guidelines for Hospital-Based Outpatient Services, Emergency Rooms, and Physician Offices. Different levels of HCPCS as well as outpatient reimbursement issues will be covered.

HIM2232L Coding II Laboratory  Credit Hours: 1
This Laboratory course provides HIM students an opportunity to apply basic concepts and techniques for ICD-9-CM and CPT coding using actual patient records and simulated patient records; both paper and electronic format from different treatment venues. Students will be guided through the practice ending by an experienced coding instructor
with a detail analysis of correct coding technique. Students will be able to assess their own level of proficiency and access assistance in areas of identified coding weaknesses. Students will be introduced to encoding systems: 3M and QuadraMed.

**HIM2433 Pathophysiology and Pharmacology**  
Credit Hours: 3  
This course provides an in-depth knowledge of disease, its etiology, medical complications, and pathophysiologic nature. Students will learn laboratory and other diagnostic tests used to confirm or rule out those diagnoses addressed. Current pharmacological treatments are explored with review and interpretation of health record data.

**HIM2500 Performance Improvement**  
Credit Hours: 2  
This course is an introduction to the principles of performance improvement and quality management in health care. Topics include: clinical quality improvement; utilization management; risk management; medical staff credentialing and peer review; accreditation standards; laws and regulations; tools for data collection, analysis, and display; and the role of the HIM department. Upon completion, students should be able to apply performance improvement techniques; collect, analyze, and display data; and support a range of quality management activities.

**HIM2512 Supervision & Organizational Life**  
Credit Hours: 2  
This course covers management and supervision principles as they are applied to healthcare settings. A study of the aspects and techniques of planning, organizing, motivating, and controlling is presented with emphasis on communication, collaboration, and decision making.

**HIM2652 Health Information Systems**  
Credit Hours: 3  
This course is an introduction to information technology related to health care and the automated tools and techniques for collecting, storing, and retrieving data. Topics include: system analysis, design, and security; file structure, networking, telecommunications, document imaging, medical informatics, the electronic health record, and implementation issues. Activities include HIM computer applications. Upon completion, students should be able to assist in the design, implementation, evaluation, and maintenance of automated information systems in health care.

**HIM2728C Coding III**  
Credit Hours: 3  
This coding course is designed to provide an introduction into basic ICD procedural coding and coding definitions, and review of coding guidelines including CPT and HCPCS. This course is taught to allow the student sufficient hands on inpatient procedural coding experience.

**HIM2810 Professional Practice 2**  
Credit Hours: 3  
This class is a continuation of the supervised professional practice experience in a health information management department. Emphasis is on health information systems, coding, and law and ethics. Upon completion, students should be able to apply health information theory to practice. Each student will be responsible for completion of a Professional Practice II Workbook.

**HIM2930L TransitionSeminar Laboratory**  
Credit Hours: 3  
This hands-on Laboratory course will focus on assisting the student to begin integration into the health information management field by exploring career options, developing a professional development plan, creating a resume, exploring credentialing requirements, and preparing the student to leave the classroom and enter the workplace. Activities conducted in the classroom will assist the student to enter the workplace as a team player with a positive attitude and team communication skills. The course will introduce the student to the preparation needed to sit for the RHIT National Examination by AHIMA.

**HIS2939 Special Topics in History**  
Credit Hours: 3  
The content of this course will vary, to be determined by the instructor of record. The course is intended to offer students the opportunity for in-depth study of specialized areas and topics in history.

**HIS2955 History Study Abroad**  
Credit Hours: 3  
A combination of classroom preparation plus foreign travel. Variable content depending on countries visited. Historical background and travel preparation will be included.
HLP1081C Total Wellness  Credit Hours: 2  
Total Wellness emphasizes the importance of knowledge, attitudes, and practices relating to personal wellness. It is a course designed to expose students to a broad range of issues and information relating to the various aspects of personal wellness including physical, social emotional, intellectual, spiritual and environmental wellness. This course integrates personal wellness and fitness in both a classroom and exercise environment. Evolving current topics such as nutrition, disease prevention, stress reduction, exercise prescription, and environmental responsibility are integrated to enable the student to understand the lifelong effects of healthy lifestyle choices. This is an International/Intercultural competency course.

HLP1087 Wellness Workout  Credit Hours: 1  
This course is an advanced extension of the wellness track classes. It reviews exercise principles and offers an opportunity for pre-testing to aid in Personal Program Development and post-testing for improvement evaluation. An individualized approach is used in helping class members to develop and implement a personal wellness program.

HLP2949 CO OP Work Experience  Credit Hours: 3  
A course designed to provide training in a student’s field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by students and employer. Students will be assigned specific course prefixes related to their academic major prior to registration.

HSA2810L Practicum in Health Facility Administration  Credit Hours: 6  
Upon completion of this course, each student will have: demonstrated an understanding of specific area(s) and functions of administration in a health facility, engage in professional practice what is required by a professional working in the designated area(s), and understand the entry points for employment in the professional area(s).

HSC0003 Basic Healthcare Worker  Clock Hours: 90.00  
The course presents basic knowledge & skills for students completing a health science program. The course introduces students to a health care delivery system, the health occupations, and teaches basic medical and employability skills.

HSC0692 Prevention of Medical Errors  Clock Hours: 2.00  
A fully online self-study course designed to provide instruction on what is a medical error, the causes of medical errors, identifying medical errors, errors related to medication administration, and how health care workers can prevent medical errors.

HSC0693 All Hazards Training-Awareness Level  Clock Hours: 4.00  
This is the first course in a series of 4 Courses presenting information on Bioterrorism and All-hazards Preparedness and Response appropriate for a variety of healthcare professionals and health care workers. Course 1 includes 4 Modules, each approximately 1 hour in length. The total time for Course 1 is 4 hours. Each Module includes several Lessons, which are self-contained 'Learning Events' that can be measured.

HSC1000 Introduction to Health Science  Credit Hours: 3  
This course is designed to provide students who are interested in health careers with an opportunity to explore the basic concepts surrounding professions related to this field. Topics covered in this course include understanding various career pathways in the health field, appreciating cultural diversity, reviewing facilities related to the healthcare profession, understanding health insurance, valuing ethics in healthcare, and other relevant topics included in an overview of the health careers.

HSC1101C Introduction to Healthful Living  Credit Hours: 1  
This course provides a personalized introduction to wellness; wellness components of flexibility, muscular strength/endurance, cardiovascular wellness, body composition, nutrition, weight management, stress management, and how students can apply this information to ensure healthful living. Opportunities are provided to learn updated information on coronary heart disease, cancer, and HIV-AIDS to assess one's personal wellness status through health-related fitness and nutrition assessments.
### HSC1149 Pharmacology  
**Credit Hours:** 2  
A course designed to introduce the Nursing student to the essential concepts and principles of pharmacology. Included are the concepts of pharmacokinetics and pharmacotherapeutics. There is an emphasis on the application of the nursing process as a practical organizational tool utilized in the care of the patient receiving pharmacological agents.

### HSC1531 Medical Terminology  
**Credit Hours:** 3  
HSC 1531 provides a broad survey of the language of medicine and health technologies. Emphasis is placed primarily on the building of medical terms from word parts. The course is intended to be the foundation of a working medical vocabulary for individuals preparing for careers in both the health professions and other areas in which this knowledge is essential.

### HSC2100 Personal and Community Health  
**Credit Hours:** 3  
This study of health problems relating to the individual community including mental health, physical fitness, nutrition, the use of tobacco, alcohol and drugs, marriage and family living, safety, and the study of diseases.

### HSC2400 First Aid and Safety  
**Credit Hours:** 3  
Accepted practices and training in first aid care of the injured and medical self-help for survival in emergencies. Course includes suggested procedures effective until adequate medical assistance can be obtained. Principles of safety problems and accident prevention are included.

### HSC2577 Principles of Nutrition for Health, Fitness, & Sport  
**Credit Hours:** 3  
The fundamentals of nutrition are explored, emphasizing the biochemical and sport physiological mechanisms of digestion, absorption, metabolic pathways, energy requirements, and nutritional status. It provides students with an understanding of nutrients and their roles in the body while examining current issues in food science. An emphasis is placed on promotion of growth and health by examining weight control, disease prevention, food safety, and planning a healthy diet.

### HUM1020 Introduction to Humanities  
**Credit Hours:** 3  
The Humanities 1020 course serves as an introduction to the nature and scope of the humanities. It addresses cultural and philosophical issues contained within the various humanities disciplines. Humanities 1020 is a writing credit course with the International/Intercultural content. Students must earn a minimum grade of a C to meet the requirements of the Gordon Rule for writing.

### HUM2700 HUMANITIES TRAVEL STUDY  
**Credit Hours:** 3  
Humanities Travel Study is a face-to-face introduction to the nature and scope of the Humanities in selected geographical areas. Students will become knowledgeable about the uniqueness, the historical development, and influences of the area's humanities content as expressed in its music, art, theater, religion, literature, philosophy, etc. HUM2700 combines classroom preparation and foreign travel. This is a repeatable course.

### HUN1201 Human Nutrition  
**Credit Hours:** 3  
Human Nutrition is the study of nutritional science, the nutrient interrelationships and the nutrition needs of persons at each stage of life cycle. Particular emphasis will be placed on diet therapy in the modification of disease process. This Course is open to allied health students or with permission of the instructor.

### HUN3011 Principles of Nutrition, Diet, & Disease  
**Credit Hours:** 3  
Study of all aspects of nutrition, from the foundation of nutrition principles to the application of evidenced based medical nutrition therapy. The nutrition needs of persons at each life stage will also be explored with particular emphasis on the role of the nurse in identifying nutrition issues related to multiple disease states in the care of the patient.

### HUN3202 Principles of Nutrition, Diet, & Disease  
**Credit Hours:** 3  
Courses in the Health Care Profession deal with the principles of dietetics and nutrition as it relates to diet and disease in clinical, community and institutional settings.
HUS1001 Introduction to Human Services
This course provides an interdisciplinary approach to the understanding of community human services agencies and systems. It introduces the student to the skills necessary for entry and professional work in education, social work, mental health, human services administration, and related employment. This course also reviews implementation of social services policies.

HUS1302 Basic Counseling Skills
This course is designed to facilitate development of basic communication skills necessary to develop an effective helping relationship with clients. Students will be introduced to basic procedures and skills in information management, assessment, evaluation, problem-solving, and referral procedures. It includes the utilization of special skills to assist individuals, families, groups in achieving objectives through exploration of a designated problem and its ramifications, examination of alternative solutions, and decision making.

HUS1320 Theories and Foundations of Crisis Intervention
This course will provide a comprehensive overview of the history of crisis intervention and crisis theory. In addition, it will also present a comprehensive model of crisis intervention and will include developing, listening, and understanding skills, as well as assessment approaches and interventions.

HUS1400 Introduction to Chemical Dependency
This course teaches the dynamics of drug addiction and dependence, classification and origins of drugs, short and long-term effects, risk of dependence, and medical uses. Drug education, laws, treatment, and rehabilitation are additional areas of focus.

HUS1801 Human Services Practicum 1
This course provides the first of two hands-on field experiences for students pursuing an associate degree in Human Services. The purpose of this course is to help prepare students for careers in the field. This practicum is a non-paid opportunity to work with local agencies and institutions related to human services. Professors assigned to the course will maintain contact with site supervisors to provide students with appropriate training and feedback. Students will meet weekly with professors to track progress. Upon successful completion of this course, students may move onto HUS2801.

HUS2200 Introduction to Group Dynamics
This course focuses on the communication behavior of individuals within group structures. Didactic and experiential techniques are used to explore the stages of group development, decision-making techniques, group problems, problem solving, resolution skills, norms, structures, leadership, authority, membership, ethics, cultural sensitivity, and intra- and inter-personal dynamics within small groups. This course incorporates experiential learning through group exercises in class.

HUS2318 Domestic Abuse and Family Violence
This course is designed as an introduction to the study of domestic and family violence. It teaches human services workers both the evaluation as well as the outreach skills necessary for working in the field of domestic violence. The dynamics of partner violence, child abuse, elder abuse, and sibling violence are explored.

HUS2401 Substance Abuse and Treatment
This course teaches theories of substance abuse and treatment. Causes of addiction, including biological and environmental influences, are explored. Emphasis is placed on understanding the dynamics of successful treatment.

HUS2415 Case Management in Human Services
This course will explore various approaches used by the human services worker to help facilitate linking an client with needed community services. It is designed to introduce students to a variety of ways in which case management is used to assist vulnerable populations of clients.

HUS2442 Drug Awareness and Education
This course offers a broad overview of the basic processes of substance use, abuse, addiction, treatment and recovery. Students will examine the biological, psychological and societal forces that encourage the use, misuse, abuse and addiction to both licit and illicit substances. The course focuses on the major substances of abuse and their historical,
social and legal impact on our society as well as their physical, psychological and social impact on individuals, families and the community.

**HUS2445 Practice for Working with Dysfunctional Family**  
Credit Hours: 3  
This course focuses on the dynamics of family dysfunction including negative patterns of parental behavior, substance abuse, physical abuse, sexual abuse, neglect, emotional abuse, and mental illness. The course addresses a broad spectrum of issues including the characteristics of dysfunctional families as well as the traits and characteristics of functional families. Emphasis is placed on causes, effects, and roles of individuals within the family system.

**HUS2500 Ethics in Human Services**  
Credit Hours: 3  
This course will help students explore the relationship between the law, the framework of ethics, and human service organizations. Legal duties and the rights of clients and providers will be discussed. The course will also provide a forum for the exploration and analysis of ethical questions and value dilemmas encountered by managers and clinicians in human services.

**HUS2502 Issues and Ethics in Domestic Abuse and Family**  
Credit Hours: 3  
This course explores theories explaining familiar abuse and teaches evaluation and outreach skills. Legal issues relating to partner violence, child abuse, elder abuse, and sibling violence are addressed.

**HUS2531 Issues of Aging and Family Dynamics**  
Credit Hours: 3  
This course examines factors such as health, finances, and social roles as they related to individuals in late adulthood. Familial role changes and independence of the elderly are explored. A holistic approach is taken to the understanding of the well-being of the elderly and the family unit in general.

**HUS2535 Elder Abuse and Aging**  
Credit Hours: 3  
This course is designed to give students an overview of abuse and neglect of the elderly. The course will focus on definitions of abuse, prevalence rates, prevention, assessment, theories of possible causes, and the referral process.

**HUS2801 Human Services Practicum 2**  
Credit Hours: 3  
This course is a continuation of the practicum for the Human Services student. This is the second of two required practicum Courses within the Human Services AS degree. The course serves as a scheduled work experience, without remuneration, which helps the student bridge the gap between classroom and workplace. This opportunity is designed to prepare students to become entry-level human service practitioners. The practicum is an intensive field experience in human services and community agencies. Students continue to learn from observations and hands-on-experience. Students must choose a different practicum site than was chosen for Practicum 1.

**IDH2121 Honors Interdisciplinary Studies**  
Credit Hours: 3  
The Honors Interdisciplinary Studies Seminar is the capstone course in the Honors Program. It is open to Honors College students who have attended Broward College for at least one term and have met half of the requirements for graduation from the Honors College. The course will be organized and unified around a specific theme, event, time period, issue/controversy, or concept, which will then be explored through at least two distinct and discernible academic fields of study. These two or more academic fields of study will come from within or across one or more of the following of Broward College's broad disciplinary units: Visual/ Performing Arts, Criminal Justice, Business, Social Sciences, Mathematics, Biological Sciences, Behavioral Sciences, Communication, Education, Natural Sciences, Computer Science, and English / Literature. Students will be exposed to a variety of texts and knowledge, which will be integrated and connected using various modes of academic inquiry. These academic and intellectual inquiries will be applied to and serve as the basis for numerous types of assessments. A Research Project is required as is at least one Critical Writing Assignment; other types of assessment should be varied and reflect the interdisciplinary nature of the course.

**IDS1030 Introduction to Team Self-Management with Education**  
Credit Hours: 2  
This course provides an introduction to Team Self-Management (TSM) theory and practice including its application in academic and work organizations. The course explores the connections among the student's purposes, intentions and behaviors; the course also develops the self-management skills required to attain personal, academic, and
professional goals. The course will also provide students with an educational plan.

**IDS1040 Team Self-management with Social Justice Topics**  
**Credit Hours: 3**  
Introduction to Team Self-Management (TSM) with Social Justice Topics explores the theory and practice of team self-management, including leading and working on a self-managing team, and developing project management skills. Additional topics include: gaining an in-depth understanding of a social justice issue through utilizing primary-based research, and scenario planning methodologies.

**IDS1999C Research in Social Justice**  
**Credit Hours: 3**  
Develops professional skills that lead to professional career success. Skills include using scientific method-based approach for knowledge creation, facilitating team meetings, recording team discussions and decisions, and working within a self-managed team studying a social justice issue.

**IDS2931 Interdisciplinary Leadership Studies**  
**Credit Hours: 3**  
This seminar focuses on the refinement of leadership skills, provides an enhanced leadership and group dynamics theory and will assist the student in developing a personal philosophy of leadership and awareness of the moral and ethical responsibilities of leadership. Topics include decision making, goal setting, building trust, empowering others, conflict resolution, managing change, team building, and servant leaders. Reading and films from classic works in literature, contemporary and multi-cultural writing, and experiential learning exercises with current leadership theories and practices. Includes a service learning component, a shadowing experience, and a journal that highlights the students' entire leadership experience, both in and out of class, consisting of written responses to each of the classic works and contemporary reading assignments, specific critical analyses of films and other assignments as given in the class.

**INR2002 Introduction to International Relations**  
**Credit Hours: 3**  
A cross national analysis of the concepts of sovereignty, power, security, economic development and national interests in the formulation of foreign policy; the respective roles of the United Nations and the European Union within the context of the growth of Intergovernmental Organizations and Non-governmental actors such as legislatures and interest groups. Study of the utilization of those concepts on policy of both leading nations and the emerging states with emphasis on both conflictual issues related to both tangible and intangible causes as well as the cooperative aspects of a more globalized and interdependent economic system. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**ISM1149C Stem IT Skills and Competencies**  
**Credit Hours: 3**  
This course is designed for freshman students in the STEM IT pathway. It serves as an introduction to Broward College, and assists students in coping with the challenges of college life. This course will help students confirm their major as they complete their IT core, will address successful learning strategies, provide basic IT fundamental skills, and will explore IT employability, work- place, and professional development skills.

**ISM2311C IT Project Management: Capstone**  
**Credit Hours: 3**  
This capstone course puts project management into an IT context, and thoroughly prepares students for the PMP or CAPM certification exam offered by the Project Management Institute (PMI).

**ISM2402C Analyzing and Visualizing Data with Power BI**  
**Credit Hours: 3**  
This course will give students a good understanding of data analysis with Power BI. The course includes creating visualizations, the Power BI Service, and the Power BI Mobile App. Practice will also be provided to thoroughly prepare students for the Microsoft MCSA certification exam Analyzing Data with Power BI 70-778.

**ISM3013C Information Systems Management**  
**Credit Hours: 3**  
This course introduces fundamental concepts of information systems and will explore approaches to managing technology. This course will equip students with an applied knowledge of management information systems for use in supporting business decisions.
ISM3057C Web Systems & Technologies  Credit Hours: 3
This course covers the design, implementation and testing of web based applications including related software, databases, interfaces and digital media. It also covers social, ethical and security issues arising from the web and social software.

ISM3139C Advanced Data Visualization with Excel  Credit Hours: 4
This course will give students the ability to add BI techniques to Excel data analysis. The course goes beyond the capabilities of tables and charts and uses Pivot Charts, the Excel Data Model, and Power BI. Practice will also be provided to thoroughly prepare students for the Microsoft MCSA certification exam Analyzing Data with Excel 70-779.

ISM3201C Database Management  Credit Hours: 3
This course applies a relational model approach to logical and physical data structure and data concepts and modeling. Business application problem solving is also included.

ISM3314C Applied Project Management  Credit Hours: 3
This course will enhance an understanding of Project Management through applied projects. Students will engage in project selection and initiation, work breakdown structure and scope management, scheduling, budgeting and cost analysis, quality control, project communication plans, project risk analysis, resource leveling and procurement issues.

All activities will support the Project management Institute (PMI) global standards, and the Project Management Body of Knowledge (PMBOK) Standards.

ISM3320 Information Systems Control  Credit Hours: 3
This course presents a balance of the management and the technical aspects of the discipline and addresses knowledge areas of the CompTIA Security+ certification exam throughout. It provides a comprehensive overview of network security and covers communication security, network and applications security, infrastructure security, threats and vulnerabilities, World Wide Web security, cryptography, operational/organizational security, disaster recovery, business continuity, as well as computer forensics.

ISM3432 Applied Quality Assurance Methodology  Credit Hours: 3
This course teaches the IT professional the fundamentals of quality assurance for system development and software creation. The learned out-comes will be an understanding of QA factors consisting of software, modeling, testing, training, standards and procedures as well as management’s position on quality assurance.

ISM3545C Data Analytics Technologies  Credit Hours: 3
This course is designed to introduce students to fundamental data concepts such as the difference between data and information, big data, and the process of manipulating and analyzing data through the use of statistics. It covers current topics relating to big data and explains how organizations use data to add value.

ISM4116C Applied Data Reporting  Credit Hours: 4
This course provides intermediate level concepts and procedures for data manipulation and visualization. Using data visualization software, students will create various chart types and visualizations, use calculations for the purpose of data manipulation, use parameters to control data values, create visualizations using geo- mapping techniques, combine data sources for blending and prepare data for analysis.

ISM4138C Applied Data Integration and Manipulation  Credit Hours: 3
In this course, students extract data from a wide variety of data sources, such as files and relational data sources, perform data integration and transformation solutions, and load data into single or multiple destinations including data warehouses. Students will solve data integration business problems using best practices and troubleshooting techniques.

ISM4220C Networks and Data Communications  Credit Hours: 3
This course will balance the most technical concepts with applied business practice. Students will learn thorough coverage of the basic features, operations, and limitations of different types of computer networks. Students will also
explore the language of computer networks as well as the effects of data communications on business and society. Topics include wireless technologies, industry convergence, compression techniques, network security, LAN technologies, VoIP, error detection and correction, near field communications, firewalls, router security problems, the Internet of Things, cloud computing, zero-client workstations, and Internet domain names.

**ISM4311C Project Management Capstone**  
Credit Hours: 3  
This capstone course will provide the opportunity for the student to demonstrate that he/she has learned material during the program and can apply it to a current issue. It should be taken during the student's last semester in the program. It provides the student with the opportunity to develop a plan to address one specific problem related to their specialization in detail.

**ISM4318C Agile Project Management**  
Variable Credit Course (3-4 Credit Hours)  
This course will cover the knowledge of agile principles and improve skills with agile techniques. Students will explore many approaches to agile such as Scrum, Kanban, Lean, extreme programming (XP) and test-driven development (TDD.) A focus will be given to Project Management Institutes (PMI) content domains for certification for agile practitioners, known as the PMI Agile Certified Practitioner (PMI-ACP).

**ISM4323C CompTIA Advanced Security Practitioner (CASP)**  
Credit Hours: 3  
The course will prepare the information technology (IT) professional to apply critical thinking and judgement across a broad spectrum of security disciplines to propose and implement sustainable security solutions that map to organizational strategies, and translate business needs into security requirements. Students will learn to conceptualize, engineer, integrate and implement secure solutions across complex environments, analyze risk impact, and respond to security incidents. Practice will also be provided to thoroughly prepare students for the CompTIA CASP certification exam.

**ISM4382 Global Information Systems**  
Credit Hours: 3  
This course addresses key management issues as they are applied to global information resources management. This course also addresses strategic global systems issues such as hardware, software, Enterprise Resource Planning (ERP), electronic business integration, security and infrastructure support for a variety of industries.

**ISM4480C Secure Electronic Commerce**  
Credit Hours: 3  
This course is an in-depth study of secure electronic commerce, cryptography, passwords, certification authorities, public key infrastructure, biometrics, digital signatures and PKI. Legal and national policy secure electronic commerce issues will be discussed.

**ISM4547C Data Analytics Management**  
Credit Hours: 3  
This course provides students with an understanding of data extraction and interpretation and their roles in creating business value. Topics covered include data quality, data visualization and exploration, and data structures and information policies. The course covers a variety of tools used for data analysis and gives the student an understanding of how to obtain, manipulate, and interpret data using current software and techniques.

**ISM4881C Technology Management Capstone Project**  
Credit Hours: 3  
This course will give the TM student the ability to utilize what he/she has learned from the TM Program and adapt it to a work environment. This will be accomplished by providing the student a senior project that includes first: project proposal, feasibility studies, identification of intellectual property, and a teamwork environment for project support which includes: budgets, schedule management, communications through reports and presentations project testing, implementation and final approval.

**ISM4930C Agile Project Management**  
Credit Hours: 3  
This course will cover the knowledge of agile principles and improve skills with agile techniques. Students will explore many approaches to agile such as Scrum, Kanban, Lean, extreme programming (XP) and test-driven development (TDD.) A focus will be given to Project Management Institutes (PMI) content domains for certification for agile practitioners, known as the PMI Agile Certified Practitioner (PMI-ACP).

**ITA1120 Elementary Italian I**  
Credit Hours: 4  
Fundamentals of speaking, listening-comprehension, reading, writing, and Italian culture. Classroom practice and
exercises are supplemented by laboratory and workbook exercises done on-line weekly. Students expected to continue further implementation and expansion of their proficiencies in ITA1121.

**ITA1121 Beginning Italian II**
Credit Hours: 4
Continuation of ITA1120. Further development of the basic skills in speaking, listening-comprehension, reading, writing, selected readings, and appreciation of culture. Classroom practice and exercises supplemented by laboratory and multi-media activities done on-line weekly.

**ITA2220 Intermediate Italian Reading & Conversation I**
Credit Hours: 4
This course is a continuation of ITA1121. Italian culture is learned through a review of reading and writing skills with emphasis on oral and written presentations. Classroom practice and exercises are supplemented by laboratory and multimedia activities designed to develop and enhance communicative competence and cultural sensitivity. This course includes compositions and readings in Italian prose, poetry, and current events. Special fees charged. This course meets the foreign language requirement and it is an International/Intercultural competency course.

**JOU1100 Basic Reporting**
Credit Hours: 3
Pre-professional course providing fundamental instruction and practice in writing as a basis for all upper division Courses in journalism. Includes writing in the news style, leads, defining news, types of stories, organization of stories, policy and libel.

**JOU1400L Newspaper Practicum I**
Credit Hours: 1
Practical application of news writing and editing principles through work with college media.

**JOU1401L Newspaper Practicum II**
Credit Hours: 2
Continuation of JOU1400L. Students may take JOU1400L and JOU1401L during the same term.

**JOU1402L Newspaper Practicum III**
Credit Hours: 2
Continuation of JOU1401L. Practical application of newspaper principles: copy editing, page layout, headline writing, rewriting, copy preparation through work with the college newspaper. Instructor’s approval required.

**JOU2200 Newspaper Editing and Makeup**
Credit Hours: 3
Course provides instruction and practical experience in copy editing, rewriting, headline writing, page design for both makeup copy and advertising, picture cropping and scaling, cutlines, and an introduction to desktop publishing.

**JOU2949 Co Op Work Experience**
Credit Hours: 3
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration.

**JST1500 Survey of Jewish Culture**
Credit Hours: 3
Survey of Jewish Culture (JST1500) is an examination of Jewish thought, Diaspora history, traditions and rituals, challenges to Jewish families and communities, and Jewish responses to the modern world.

**JST1700 The Holocaust**
Credit Hours: 3
Evaluation used, but not limited to, short-essay, group projects, discussions, multiple-choice tests, quizzes, take-home exams, summaries, critiques, reaction papers, surveys, short-answer exams, classroom debates, presentations, and blogs.

**JST2400 Survey of Jewish Civilization**
Credit Hours: 3
A survey of the history of Jewish civilization beginning with the origins of the Hebrews, through early Christianity and the Renaissance, to the State of Israel.
JST2815 History of Modern Israel
This course will begin with the period of the Enlightenment for the Jewish people and will follow the historical development which led to the development of the State of Israel.

LAH1004 The History of the Two Americas II
(Spring 2017 - Latin American History Since 1830)
This course is a study of Latin America from the development and evolution of Amerindian society including the Mesoamerican, Andean and Brazilian worlds, through the conquest and colonization of the region by Europe, ending with the rise of independence by the middle of the 19th century.

LAH1005 The History of the Two Americas II
This course is a survey of significant social, political, and economic developments of modern Latin America after independence, from the consolidation of the national states to the present.

LEI1000 Introduction to Recreation
This course acquaints the individual with the recreation organization and opportunities for leaders in the field.

LEI1260 Introduction to Fitness & Outdoor Recreation
This course will introduce students to the career opportunities available in the field of outdoor recreation/adventure education.

LEI1700 Recreation for Special Groups
An overview of the characteristics and needs of members of special groups and how to plan and implement recreational activities appropriate for each group.

LEI2401 Sports, Fitness & Recreation Management
A course primarily designed for the student to learn about the different aspects of managing recreational programs and events. The student will be exposed to the many and varied needs of developing a quality program or event.

LEI2731C Sports, Fitness & Recreation Therapy
An overview of various therapies that can be useful in a recreational setting.

LEI2861 Sports, Fitness, Recreation/Technology & Equipment
The rapid growth of technology and sophistication of equipment, necessitate the recreation specialist to keep abreast of developments in the market place. This course is designed to expose students to hardware, software, and equipment that are commonly used in centers across the nation to attract participants in recreational activities. Opportunities are provided for a hands-on learning experience in this technology and equipment.

LIT1172 Jewish Literature II: Holocaust to Present
A study of selected works from the Holocaust to the present. Analyzes the major characteristics of worldwide modern Jewish and Israeli literature. Includes such authors as Weisel, Malamud, Bellow, P. Roth, Ozick, Singer, Oz, Yehoshua and Appelfeld. May be used for study abroad.

LIT1370 The Bible as Literature
Students will examine the language, images, symbols, and literary structures of the Bible (New King James version or equivalent). Students will also actively explore the ways in which the Bible has shaped the literature of English-speaking cultures. Students will read substantial portions of the Old and New Testament and will critically interpret the book as they would any other literary text. The will also discuss the Bible's historical context.

LIT2000 Introduction to Literature
This introductory course exposes students to the study of literature and a range of widely recognized authors and works. Students will examine and interpret a diverse and representative body of works from genres such as short stories, poetry, creative non-fiction, plays and novels. These selections may include works from many periods and cultures within American, British, and World Literature. Upon successful completion of this course, students will be able to demonstrate an understanding of fundamental concepts and ideas in each of the major literary forms. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

LIT2020 Introduction to the Short Story Credit Hours: 3
A survey of the development of the short story, to include analysis of short stories by authors that reflect a diversity of cultural perspectives. This course may include a wide variety of authors such as Alexie, Atwood, Baldwin, Bechdel, Borges, Calvino, Camus, Carver, Cather, Chekhov, Chopin, Crane, De Maupassant, Erdrich, Faulkner, Fuentes, Hawthorne, Hemingway, Hurston, Kafka, Marquez, O'Connor, Oates, Poe, Silko, Walker, among others. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

LIT2030 Introduction to Poetry Credit Hours: 3
Students will be introduced to a representative selection of poetry from various cultures and time periods. Texts may be selected from major figures within movements during specific periods, such as Romanticism, Modernism or New Formalism, the Black Arts Movement, the New York School or the San Francisco Renaissance, Confessional Poetry, Performance Poetry or Concrete Poetry, the Beats, Slam Poets, Language Poets or any other emerging forms, writers or groups within the art. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

LIT2110 World Literature from Ancient World through Renaissance Credit Hours: 3
A survey of literature from the ancient, medieval, and early modern world. The works of selected authors may include Homer, Sappho, Plato, Sophocles, Ovid, Confucius, Lao Tzu, Dante, Chaucer, Boccaccio, Cervantes, and Shakespeare. Texts may also include excerpts from the Old and New Testaments, the Koran, Bhagavad-Gita, the Rubayat of Omar Khayyam, and The Arabian Nights. Upon successful completion of the course, students will comprehend the significant literary figures, mythologies, and historical and philosophical movements in world literature masterpieces. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

LIT2120 World Literature from Enlightenment to Modern Credit Hours: 3
Students will be introduced to a representative selection of world literature from the seventeenth century to the present. Texts may be selected from major literary figures such as Moliere, Voltaire, Rousseau, Franklin, Equiano, Wollstonecraft, deGournay, Tolstoy, Gandhi, Camus, Lessing, Eliot, Achebe, Neruda, and Garcia-Marquez, Erdrich, Kincaid, and Lahari. Upon successful completion of the course, students will be exposed to significant authors, themes, literary genres, and historical and philosophical movements in world literature masterpieces. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

LIT2190 Caribbean Literature Credit Hours: 3
Students will be introduced to works that represent diverse Caribbean literature covering original and translated texts from Anglophone, Francophone, and Spanish-speaking Caribbean. Upon successful completion of the course, students will understand significant concepts and assess a diverse body of literary figures including authors, poets, and critics associated with the Caribbean. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

LIT2300 Literature of the Supernatural & Science Fiction Credit Hours: 3
LIT2300 is a writing course and a survey course of science fiction, high fantasy, and dark fantasy/horror literature. This is also an International/Intercultural course. Students will examine works that cover such topics as the future, technology, science, other worlds, paranormal life forms and occurrences, aberrant psychology and imaginary societies. This course may include readings from a wide variety of authors such as Isaac Asimov, Ray Bradbury, Michael Crichton, Mary Shelley, Edgar Allan Poe, Stephen King, J.R.R. Tolkien, C.S. Lewis, R.K. Rowling, Clive Barker, and Lord Dunsany. This is a writing course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.
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A broad survey of and critical introduction to children’s literature, from picture books to young adult novels. This literature may be in the form of realistic fiction, traditional and modern fantasy, mythology and fairy tales, poetry, and/or nonfiction. Topics covered may include genre, literary value, ethnicity, family dynamics, book awards, pedagogy, and censorship. Students will analyze texts from an array of authors across the world, including, but not limited to: A.A. Milne, Dr. Seuss, Roald Dahl, Sara Pennypacker, C.S. Lewis, J.R.R. Tolkien, Maurice Sendak, Shel Silverstein, Norton Juster, Frances Hodgson Burnett, Judy Blume, Laurie Halse Anderson, Richard Peck, J.K. Rowling, Walter Dean Meyers, Matt de la Peña, Margarita Engle, Meg Medina, Nikki Grimes, Naomi Shihab Nye, and Andrea Davis Pinkney.

A discussion and analysis of mystery fiction by investigation of the plot, characters, settings, themes, styles, motifs, and development of some of the most representative authors of detective, police, procedural, spy, and other mystery thriller fiction. Specifically traces the history and conventions of British and American traditions, placing them in context with the past and present of the genre. Includes an analysis of "classic" mystery fiction, and possibly further analysis of contemporary authors and styles that reflect the diversity and complexity of the genre today, as well as television and film. Includes authors such as Poe, Christie, Doyle, Collins, Hammett, Mosley, Leonard, Highsmith, and Flynn.

An exploration of the ways literature represents and perpetuates sex roles and stereotypes. Readings include drama, short stories, novels, and poetry from classical to contemporary.

Literary topics of special interest to students. Course offerings may be in such areas as western literature, the study of the greater novels, or ethnic literature. Class discussions may also include films.

A college algebra course containing topics such as solving, graphing and applying linear and quadratic equations and inequalities; exponential and logarithmic properties; linear, quadratic, rational, absolute value, square root, cubic, and reciprocal functions operations, compositions, and inverses of functions; and systems of equations and inequalities, all with applications throughout the course. Recommendation from the Mathematics Department or at least a grade of a “C” in the prerequisite coursework is required.

This course, in conjunction with MAC1140, is designed to prepare the student for the study of calculus. Topics include a functional approach to trigonometry, trigonometric equations, trigonometric identities, solving triangles, vectors, polar coordinates and equations, and parametric equations. A graphing calculator may be required. Recommendation from the Mathematics Department or at least a grade of a “C” in the prerequisite coursework is required.

This course, in conjunction with MAC1114, is designed to prepare the student for the study of calculus. Topics include sequences, series, mathematical induction, matrices, determinants, and systems of equations. Also included are polynomial, rational, exponential, and logarithmic functions and equations; and polynomial and rational inequalities. Functions and graphs are emphasized. A graphing calculator may be required. Recommendation from the Mathematics Department or at least a grade of a “C” in the prerequisite coursework is required.

This course is designed to satisfy the dual requirements of MAC1114 and MAC1140, thus preparing the student for the study of calculus. In this course the student will study various function families (e.g. polynomial, exponential, logarithmic, trigonometric) from both analytic and graphical viewpoints, and will use them to model real-life
situations. The student will be exposed to additional topics that will deepen their mathematical understanding, including systems, matrices and determinates, sequences and series, parametric equations, and polar coordinates and equations. A graphing calculator may be required. Recommendation from the Mathematics Department or at least a grade of a “B” in the prerequisite coursework required.

**MAC2233 Calculus for Business, Social & Life Sciences**  
Credit Hours: 3  
This is a general education course which includes the college-level skills of calculus such as: functions, graphs, limits, differentiation, integration, average and instantaneous rates of change, and other applications. Recommendation from the Mathematics Department or at least a grade of a “C” in the prerequisite coursework required.

**MAC2311 Calculus & Analytical Geometry I**  
Credit Hours: 5  
This is the first of a three-course sequence in calculus. Students may need to a graphing calculator throughout the sequence of Courses. Topics include: analytic geometry, functions, limits, continuity, derivatives and their applications, transcendental functions, anti-derivatives, and definite integrals. Certain sections of this course may require the use of a graphing calculator. Recommendation from the Mathematics Department or at least a grade of a “C” in the prerequisite coursework required.

**MAC2312 Calculus & Analytical Geometry II**  
Credit Hours: 5  
This is the second of a three-course sequence in calculus. Topics include techniques of integration, conics, polar coordinates, indeterminate forms, L'Hopital's Rule, proper integrals, infinite series, parametric equations, improper integrals, volume, arc length, surface area, work, and other applications of integration. A graphing calculator may be required in certain sections of this course. Recommendation from the Mathematics Department or at least a grade of a “C” in the prerequisite coursework required.

**MAC2313 Calculus & Analytical Geometry III**  
Credit Hours: 5  
This is the third of a three-course sequence in calculus. Topics include vectors in 3 space, 3 dimensional surfaces, multivariate functions, cylindrical and spherical coordinates, multiple integrals, partial derivatives, vector fields, a graphing calculator may be required in certain sections of this course. Recommendation from the Mathematics Department or at least a grade of a “C” in the prerequisite coursework required.

**MAD2104 Discrete Mathematics**  
Credit Hours: 3  
This course will emphasize mathematical theory, formal methods of proof, and applied problem-solving techniques. Topics include formal proof, sets, logic, functions, probability, relations, graphs, trees, and Boolean algebra.

**MAE3143 Interactive Middle School Mathematics Projects**  
Credit Hours: 3  
This course is designed for students who are majoring in middle and secondary mathematics education and who will be obtaining teaching certification in grades 5-9 and 6-12. In this course students learn principles of effective curriculum design and assessment and apply these principles by designing and developing interactive mathematics curriculum projects for middle school students. This course is requires structured clinical placement in which students present their projects in a middle school classroom environment. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required certification. (20 school-based hours)

**MAE3941 Teaching Middle & Secondary School Mathematics**  
Credit Hours: 3  
This course is designed to provide the student with the opportunity to apply learned concepts by observing and teaching small groups and whole class lessons in the mathematics classroom. Extensive Writing Component in the form of a journal is required. Forty hours (40) of structured school-based hours is required.

**MAE4310 Methods of Teaching Math in Elementary School**  
Credit Hours: 3  
This course introduces conceptually and develop-mentally appropriate mathematics content based on the five content areas identified by the Florida Sunshine State Standards. These are Numeration & Number Sense, Geometry,
Measurement, Algebraic Thinking, and Data Analysis & Probability. Within these content areas, pre-professional educators will learn techniques consistent with the national process standards and research-based procedural strategies. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required for teacher certification. Fifteen hours of field placement are required.

**MAE4320 Methods of Teaching Mathematics in Middle School**  
Credit Hours: 3  
This course is designed to introduce methods and strategies that have been proven to be effective for teaching middle school mathematics. Topics in appropriate instructional techniques and selection of appropriate resources for diverse classroom activities. Additional topics include real world applications, the use of technology, understanding the diverse learner, multiple means of assessment and learning styles. In this course, the pre-professional educator learns principles of effective curriculum design and assessment and applies these principles by designing and developing interactive mathematics curriculum projects for middle school students. This course addresses specific Sunshine State Standards subject matter competencies.

**MAE4330 Methods of Teaching Math in Secondary School**  
Credit Hours: 3  
This course is designed to introduce methods and strategies that have been proven to be effective for teaching secondary school mathematics. Topics in appropriate instructional techniques and selection of appropriate resources for diverse classroom activities, real world applications, the use of technology, understanding the diverse learner, multiple means of assessment and learning styles. The pre-professional educator learns principles of effective curriculum design and assessment and applies these principles by designing and developing interactive mathematics curriculum projects for high school students. This course addresses specific Sunshine Standards subject matter competencies and pedagogy pertinent to the discipline. Contact instructor for details regarding 20 hours of field.

**MAE4944 Student Teaching in Mathematics**  
Credit Hours: 11  
**MAE4945 Student Teaching in Mathematics**  
Credit Hours: 12  
*(Credit hours of the internship are dependent on the student’s effective term.)*  
This course is designed to "provide students with multiple opportunities to practice implementing the 12 Florida Educators Accomplished Practices including effective planning, instruction, management and assessment techniques in a real-world middle and high school classroom setting under the supervision of a certified teacher."

**MAN2021 Introduction to Management**  
Credit Hours: 3  
This course covers fundamental management principles and concepts. Emphasis is placed on the management functions of planning, organizing, staffing, directing and controlling. Principles of scientific management, motivation, and economic analysis are studied relative to their use in business decisions. It also examines the evolution of management theory and application, organizational environments, technology influence, corporate social responsibility and ethics.

**MAN2300 Introduction to Human Resource Management**  
Credit Hours: 3  
The course is an overview of the field of Human Resources Management. The role of Human Resources in achieving the strategic objectives of an organization will be discussed through the exploration of basic HR functions such as recruiting, developing, and compensating employees.

**MAN2604 International Business Environment**  
Credit Hours: 3  
A basic course in international business theory and practice focusing on the challenges of managing the operations of an international business in diverse legal, political, economic, and cultural environments. Emphasis is placed on strategic planning and decision-making for the international operations of domestic, foreign and multinational corporations.

**MAN3240 Organizational Behavior & Leadership**  
Credit Hours: 3  
This course teaches students individual and group behavior in organizations. Students develop an understanding of how organizations can be managed more effectively. Course content includes motivation, group dynamics, conflict resolution, goal setting and rewards, job design, work stress, power/politics, and organizational change and development.
MAN3303 Management & Leadership  Credit Hours: 3
This course teaches students the basic concepts, principles, and techniques of business leadership. Emphasis is on developing a solid leadership foundation while centering in the real themes, demands, and opportunities of an evolving and dynamic business workplace. The course incorporates basic leadership skill development as it relates to the core aspects of management practice.

MAN3310 Human Resource Management  Credit Hours: 3
This course introduces the full range of human resource management functional areas, including recruiting and hiring staff, performance evaluations, employment regulations, discipline and termination, downsizing, compensation and benefits, job analysis, the organized labor setting, equity/diversity issues, and policy design. The approach will focus on current issues and applications.

MAN3930 Seminar in Business & Management  Credit Hours: 1
This course focuses on current and emerging issues in business management. Its format and topic will vary but it will be a seminar which will address a specific business and management topic such as financial markets, international trade, human resources, cultural issues or economic subjects. The requirements of each student will vary with the topics in question. This course may not be repeated, and will only be offered in the Fall Semester.

MAN3931 Seminar in Business & Management II  Credit Hours: 1
This course focuses on current and emerging issues in business management. Its format and topic will vary but it will be a seminar which will address a specific business and management topic such as financial markets, international trade, human resources, cultural issues or economic subjects. The requirements of each student will vary with the topics in question. This course may not be repeated, and will only be offered in the Winter Semester.

MAN3932 Seminar in Business & Management III  Credit Hours: 1
This course focuses on current and emerging issues in business management. Its format and topic will vary but it will be a seminar which will address a specific business and management topic such as financial markets, international trade, human resources, cultural issues or economic subjects. The requirements of each student will vary with the topics in question. This course may not be repeated, and will only be offered in the Summer Semester.

MAN4102 Managing Cultural Diversity  Credit Hours: 3
This course represents the basic concepts, principles, and techniques associated with leading cultural diversity in the global marketplace. Emphasis will be on the students developing an understanding of the interplay between leadership, cultural diversity, and the global business models. Students will also gain an understanding of how these concepts relate to and are applied in the regional markets like Asia, Latin America, Europe, Africa and the Middle East.

MAN4120 Leadership Challenges & Supervision  Credit Hours: 3
This course teaches the application of leadership theories, which include skill formation to develop leadership abilities. Team building skills are emphasized and discussed to enhance leadership effectiveness. Students learn the importance of visioning in their organizations.

MAN4320 Training & Development  Credit Hours: 3
This course emphasizes developing, implementing, and evaluating activities and programs that address employee training and development, performance appraisal, and talent and performance of management to ensure that the knowledge and skills, abilities, and performance of the workforce meet current and future organizational and individual needs.

MAN4330 Compensation & Benefits  Credit Hours: 3
This course emphasizes developing, implementing/administering, and evaluating compensation and benefit programs for all employee groups in order to support the organizations goals, objectives and values.

MAN4504 Operations Management  Credit Hours: 3
This course teaches the operational decision-making management techniques to improve the processes and
productivity in organizations. Topics discussed are quality and outcomes; efficiency; forecasting; work flow processes; inventory control; design of goods and services; waiting lines; and critical path. Managing a project from beginning to end, including how to identify needs, and define, assign, and track items, is addressed.

**MAN4570 Procurement Management**  
Credit Hours: 3  
This course is an introduction to the concepts, principles, and techniques of purchasing physical resources. Students will develop a basic knowledge of sound procurement practices within a managerial setting for all types of organizations.

**MAN4720 Strategic Management & Policy**  
Credit Hours: 3  
This course emphasizes strategic planning and strategy implementation in an organization. Students learn how to perform internal and external audits, identify problems, and formulate goals and objectives. Students will develop action plans, and evaluate the effectiveness of the outcome of the plan. Case studies are used to promote decision-making abilities.

**MAN4900 Capstone Project**  
Credit Hours: 3  
This capstone course will provide the opportunity for the student to demonstrate that he/she has learned material during the program and can apply it to a current issue. It should be taken during the student's last semester in the program. It provides the student with the opportunity to develop a plan to address one specific problem related to their specialization in detail.

**MAN4937 Applied Concepts in Human Resource Management**  
Credit Hours: 3  
This course focuses on the student reviewing and applying concepts in several functional areas of Human Resources.

**MAN4940 Internship**  
Credit Hours: 3  
This course provides a practical application of concepts examined during the BAS program.

**MAP2302 Differential Equations**  
Credit Hours: 3  
Topics include the classification, solution and application of differential equations, including numerical methods, Laplace transforms, and series solutions.

**MAR1011 Principles of Marketing for the 21st Century**  
Credit Hours: 3  
An introductory course covering the marketing management process. Special topics include the marketing manager's role in a market-directed economy, marketing objectives, strategic planning, and developing marketing mixes for target markets as well as traditional and new media. Material is presented as it relates to the four "Ps" of marketing: product, place, promotion, and price. As a learning activity, students analyze and prepare case studies of businesses engaged in manufacturing, wholesaling, retailing and service.

**MAR2141 International Marketing**  
Credit Hours: 3  
This course examines basic marketing principles related to business in an international setting. Emphasis is placed on the role of the international marketing manager in the development of marketing strategies for a variety of markets in diverse cultural and economic situations. Topics covered include the decision-making process in the area of foreign market analysis, target market identification, product planning, promotion, and channels of distribution.

**MAR2644C Data Based Marketing**  
Credit Hours: 3  
This course provides a foundation for students to understand the core principles and tools of digital analytics and methods to improve business performance through digital measurement of sales, marketing, or other business data.

**MAR3231 Retail Management**  
Credit Hours: 3  
In this course we explore the management functions unique to retail store operations. This course will familiarize students with decisions involved in running a retail firm and the concepts and principles for making those decisions. Emphasis is placed on principles of the retail environment, operations and administration.
MAR3323 Integrated Marketing Communication  Credit Hours: 3
Introduces the student to the field of integrated marketing communications (IMC) and its role in the marketing mix. Emphasis is placed on understanding the role for advertising, sales promotion, public relations, direct marketing, social media, and personal selling tools in the IMC program of an organization to achieve effective marketing campaigns based on clear objectives, market segmentation and target marketing, within established time and cost parameters.

MAR3524 Marketing Analytics  Credit Hours: 3
In this course, we explore how data can be used for understanding and analyzing consumer demand. This type of data-informed decision making is the key to data-informed decision making is the key to maintain competitiveness in today's market place. Firms collect information about consumers when they shop. Consumers also automatically leave footprints when they interact with others on the internet. All these data sources, both internal and external to the firm, are used to understand consumer demand in modern marketing research.

MAR3802 Marketing Management  Credit Hours: 3
This course helps develop the marketing knowledge and skills necessary for the successful manager to address the intermediate marketing issues surrounding the complex demand management problem all organizations face. Students will understand the marketing concepts, including the development of a marketing plan including objectives, strategies and tactics.

MAR4840 Services Marketing  Credit Hours: 3
This course is a study of marketing decision making in services sectors. Primary focus is on the unique aspects of services that impact marketing decision making in small and medium-size enterprises. This course will build upon basic marketing principles to provide learners with the skills necessary to market and manage services in an increasingly competitive global marketplace. Students will apply course concepts to solve problems in actual business cases involving firms in North America, Europe, and Asia.

MAS2103 Linear Algebra  Credit Hours: 3
A first course in linear algebra, emphasizing the algebra of matrices and vector spaces. Recommended for students majoring in mathematics or related areas.

MAS3301 Abstract Algebra with Introductory Number Theory  Credit Hours: 3
A course for math and math education majors. Abstract algebra is designed for the student experienced with using mathematical calculations to solve problems, and who now wishes to analyze the underlying justifications for these calculations' legitimacy. In MAS3301 the student will discover properties shared by seemingly disparate mathematical structures called groups, rings, and fields, by abstracting their common underlying features and creating proofs based upon these commonalities. Number theory topics that are foundational to this course will be studied as well.

MAT0018C Developmental Mathematics I  Credit Hours: 4
This is a course designed to improve students' abilities with arithmetic, basic algebra, and problem solving. Topics studied include number families, arithmetic, order of operations, geometric formulas, unit analysis, linear equations in one variable, and data analysis. Problem solving is an integral part of this course. This course teaches the student to understand and communicate concepts of arithmetic and algebra, both orally and written, and helps prepare the student for college-level mathematics and math-based Courses. A computerized laboratory component will supplement classroom instruction. Students will have individualized learning plans that depend on the results of a diagnostic test. Due to the nature of this course, calculators are not permitted.

MAT0022 Developmental Mathematics Combined  Credit Hours: 4
A course designed to satisfy the requirements of both MAT0018C and MAT0028C in one semester. Topics to be studied include arithmetic with whole numbers, integers and rational numbers, linear equations and inequalities in one variable, factoring, and basic linear graphing. Problem solving involving real-life scenarios is an integral part of this course. This course will teach the student to understand and communicate concepts of algebra in the language of
MAT0028C Developmental Mathematics II  
**Credit Hours: 4**
This is a course designed to broaden the students' arithmetic and equation-solving skills to include solving linear inequalities in one variable, polynomial factoring, solving quadratic equations, laws of exponents, rational and radical expressions, and graphing lines. Problem solving involving real-life scenarios is an integral part of this course. This course will teach the student to understand and communicate concepts of algebra in the language of mathematics, both orally and written. This course enhances the student's problem-solving skills and helps prepare the student for college-level mathematics and mathematics-based Courses. A computerized laboratory component will supplement classroom instruction. Students will have individualized learning plans that depend on the results of a diagnostic test. Due to the nature of this course, calculators are not permitted.

MAT0055 Developmental Mathematics Module  
**Credit Hours: 1**
A course designed to satisfy the requirements of upper level developmental math in modular format. This course is for students who score between 109 and 112 on the PERT placement score. Students will then be given the PERT Diagnostic to identify skills in the developmental math sequence that have not yet been mastered. An individual learning plan will be established and students will be assigned to the module(s) containing those competencies not yet mastered. Topics for study determined by student's P.E.R.T. Diagnostic test results. This course will teach students to understand and communicate concepts of algebra in the language of mathematics, both orally and written. It is non-transferable. Due to the nature of this course, calculators are not permitted.

MAT0056 Developmental Mathematics Module  
**Credit Hours: 2**
A course designed to satisfy the requirements of upper level developmental math in modular format. This course is for students who score between 109 and 112 on the PERT placement score. Students will then be given the PERT Diagnostic to identify skills in the developmental math sequence that have not yet been mastered. An individual learning plan will be established and students will be assigned to the module(s) containing those competencies not yet mastered. Topics for study determined by student's P.E.R.T. Diagnostic test results. This course will teach students to understand and communicate concepts of algebra in the language of mathematics, both orally and written. Due to the nature of this course, calculators are not permitted.

MAT0057 Developmental Mathematics: A Modular Approach  
**Credit Hours: 4**
This course is designed to satisfy the requirements of both MAT0018C and MAT0028C in one semester. The course is delivered in a guided, self-paced format.

MAT1033 Intermediate Algebra  
**Credit Hours: 3**
This is a course designed for students with strong arithmetic skills (without requiring a calculator) and an algebra background. This course will extend students’ algebra skills to include solving systems of linear equations in two variables, factoring polynomials, performing operations on rational expressions, solving rational equations, solving quadratic equations with complex solutions and recognizing relationships between radical expressions and rational exponents. Problem solving involving real-life scenarios is an integral part of this course. In this course, students will enhance their problem-solving abilities and their ability to communicate concepts of algebra in the language of mathematics, both orally and in writing.

MCB2010 Microbiology  
**Credit Hours: 3**
An introduction to microbiology emphasizing principles of basic morphology, physiology modes of transmission, biochemistry and genetic mechanisms. It will include a survey of representative types of micro-organisms and the role of pathogenic organisms in causing diseases and infections.

MCB2010L Microbiology Laboratory  
**Credit Hours: 1**
This Laboratory course will complement Lecture topics and include the application of fundamental techniques in the
isolation cultivation, and identification of micro-organisms.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCB3020</td>
<td>General Microbiology</td>
<td>3</td>
<td>Structure, nutrition and growth of microorganisms; characteristics of representative microorganisms and viruses; metabolic properties and introduction to microbial genetics, pathogenicity, ecology and industrial applications of microorganisms.</td>
</tr>
<tr>
<td>MCB4652</td>
<td>Environmental Microbiology</td>
<td>3</td>
<td>Overview of microorganisms in the environment including occurrence, abundance and distribution; processes of microbial interaction with the environment; and practices of applied environmental microbiology</td>
</tr>
<tr>
<td>MCB3020L</td>
<td>General Microbiology Laboratory</td>
<td>1</td>
<td>This laboratory course will complement lecture topics and include the application of fundamental techniques used in the isolation, cultivation and identification of microorganisms and viruses.</td>
</tr>
<tr>
<td>MEA0334L</td>
<td>Administrative Office Procedures Lab</td>
<td>1.50</td>
<td>Laboratory portion of MEA0334 and MEA0335. Competencies and evaluations for Electronic medical records simulation, office banking, financial duties, office management, business letters and memos, insurance protocols, billing forms and super bills, patient charting and documentation. In addition, students will prepare resumes, cover letters and interview responses.</td>
</tr>
<tr>
<td>MEA0382</td>
<td>Medical Law &amp; Ethics</td>
<td>32.00</td>
<td>The ethics of medicine and medical practice are studied. Legal requirements and implications to the medical professional are stressed.</td>
</tr>
<tr>
<td>MEA0540</td>
<td>Basic Electrocardiography for Medical Assistants</td>
<td>37.00</td>
<td>This course will discuss a brief history of electro-cardiography, a brief discussion of the cardiovascular system, the role of the Medical Assistant, the care and use of the electrographic (EKG) machine, positioning the patient, electrical hazards, normal EKG pattern, identifying and reporting abnormal EKG patterns and mounting the EKG. Ambulatory cardiac monitors will be studied.</td>
</tr>
<tr>
<td>MEA0582</td>
<td>Medical Assisting Simulation Laboratory I</td>
<td>24.00</td>
<td>Designed to orient the medical assistant to real life experiences of patient care in the physician's examining room via simulation. Students will learn to apply the principles involved to patient charting, patient assessment and examination, vital signs, laboratory techniques including phlebotomy and urine analysis.</td>
</tr>
<tr>
<td>MEA0800</td>
<td>Practicum in Medical Assisting</td>
<td>213.00</td>
<td>Student assigned to physician's office, clinic, or laboratory for a total of two hundred hours. Conference meetings will be arranged on an individual or group basis at a time and place to be arranged by the student and the coordinator. Attendance at group orientation prior to assignment is mandatory.</td>
</tr>
<tr>
<td>MEA1007</td>
<td>Introduction to Medical Assisting</td>
<td>4</td>
<td>Course provides background for understanding, exploring medical office practices and functions and responsibilities of the medical assistant. Student introduced to legal, ethical issues that impact the profession, to patient communication and education, and given overview of administrative and financial operations of a medical office.</td>
</tr>
<tr>
<td>MEA1206</td>
<td>Clinical Procedures</td>
<td>4</td>
<td>Designed to orient the medical assistant to all phases of patient care in the physicians examining room. Discussion of basic principles involved relating to: vital signs, physical examination, minor surgery, instrumentation sterilization, preparation of medications, physical therapy modalities. Approved uniform required.</td>
</tr>
<tr>
<td>MEA1206L</td>
<td>Clinical Procedures Laboratory</td>
<td>2</td>
<td>Laboratory portion of MEA1206. Designed to orient the medical assistant to all phases of patient care in the</td>
</tr>
</tbody>
</table>
physicians examining room. Practice of basic principles involved relating to vital signs, physical examination, minor
surgery, instrumentation sterilization, preparation and administration of medications, basic principles of nutrition and
physical therapy modalities will be studied.

**MEA1235 Medical Assisting A & P w/Disease Process** Credit Hours: 3
Introduction to anatomy and physiology of the human body, including skin and sensory, muscular/skeletal, nervous,
endocrine cardiovascular, blood and lymph, respiratory, digestive, urinary, reproductive systems.

**MEA1242 Pharmacology for the Medical Assistant** Credit Hours: 3
An introduction to medications, their classifications, dosage, administration, and the legal and ethical considerations
applied.

**MEA1245 Phlebotomy for the Medical Assistant** Credit Hours: 2
Review of laboratory, clinical procedures in a medical office. Includes discussion of possible complications of
phlebotomy. Student will perform venipuncture and capillary sticks while using proper safety procedures.

**MEA1245L Phlebotomy for the Medical Assistant Lab** Credit Hours: 2
Practical application of mea1245. Lab review of clinical procedures in a medical office. Student will perform venipuncture
and capillary sticks while using proper safety procedures.

**MEA1258 Radiology for the Medical Assistant I** Credit Hours: 2
Basic principles of x-ray film handling and processing; radiographic technique and radiation biology, including
film and maintain film files c. Evaluate film quality d. Demonstrate legal and ethical responsibilities e. Prepare patients
for, assist with, and follow up patients after examinations and treatment f. Recognize and respond to emergency situations
g. Recognize and practice safety and security procedures.

**MEA1259 Radiology for Medical Assisting Part II** Credit Hours: 2
Provides instruction in radiographic anatomy, positioning, procedures, and pathology of the upper and lower extremities,
shoulder girdle, pelvis, spine, bony thorax, chest, abdomen, skull, facial bones, and sinuses.

**MEA1259L Radiology for Medical Assisting Part II Lab** Credit Hours: 1
Laboratory portion of MEA 1259. Practical application of the principles of radiation protection, radiographic technique,
ion, film handling and processing, darkroom operation, radiographic positioning and procedures related to the upper
extremities, lower extremities, and chest.

**MEA1265 Medical Lab Procedures** Credit Hours: 3
This course constitutes an introduction to clinical equipment and basic laboratory diagnostic testing of urine and serum.
The student will learn the chemical, physical and microscopic examination of urine through laboratory experience and
lecture. The student will learn the proper collection technique of specimens for laboratory testing. Pharmacology
appropriate to the module will be discussed.

**MEA1265L Medical Office Lab Procedures** Credit Hours: 1
This course constitutes an introduction to clinical equipment and basic laboratory diagnostic testing of urine and serum.
The student will learn the chemical, physical and microscopic examination of urine through laboratory experience and
lecture. The student will learn the proper collection technique of specimens for laboratory testing. Pharmacology
appropriate to the module will be discussed.

**MEA1304 Medical Front Office Practices** Credit Hours: 2
Introductory study of those skills required to perform front office functions in a medical office. Includes insurance, cpt
coding for quality and medical manager system.
MEA1304L Medical Front Office Practices Lab  
Credit Hours: 1  
Course provides background for understanding, exploring medical office practices and functions and responsibilities of the medical assistant. Student introduced to legal, ethical issues that impact the profession, to patient communication.

MEA1542 EKG for Medical Assistants  
Credit Hours: 3  
This course will discuss the history of electrocardiography, a brief discussion of the cardiovascular system, the role of the Medical Assistant, the care and use of the electrocardiographic (EKG) machine, positioning the patient, electrical hazards, normal EKG pattern, identifying and reporting abnormal EKG patterns and mounting the EKG. Ambulatory cardiac monitors will be studied.

MEA1542L EKG  
Credit Hours: 1  
Lab component of MEA1542. The electrocardiography is a non-invasive test on the heart using an electrical machine that measures the electrical impulses of the heart in tracings. This course teaches the variations in the electrical potential produced by the heart and is used to diagnose irregularities in heart function. This course provides a recognition of emergencies in the EKG graph that will alert the physician to determine the need for possible further invasive testing. Students will perform 12 and 5 lead- EKG, as well as the drugs and side effects affecting EKG. This topic includes training in stress testing and holter monitoring.

MEA1800L Externship in Medical Assisting  
Credit Hours: 6  
Student assigned to physician’s office, clinic, or laboratory to perform Medical Assisting duties.

MEA1952 Seminar in Medical Assisting  
Credit Hours: 2  
Lecture course designed to serve as a review for medical assisting students in preparation for their national certification examination. Selected areas of the curriculum will be emphasized as needed.

MET4700 Atmospheric Processes  
Credit Hours: 3  
Upper level, introductory course covering the origin, composition and structure of the atmosphere, solar energy and the Earth's energy budget, air temperature, humidity, clouds and cloud formation, precipitation, global circulation model, air masses, fronts, mid latitude cyclones, severe storms, air pollution, atmospheric optics, and global climates and climate change. The course focuses on the physical and chemical processes associated with each topic, and how each forms part of the global atmospheric system.

MGF1106 Foundations of Mathematical Reasoning  
Credit Hours: 3  
This is a general education course which includes the college-level skills not included in the Courses MAT0018C Pre-Algebra, MAT0028C Elementary Algebra, and MAT1033 Intermediate Algebra. The course will include topics in logic, geometry, set theory, probability, statistics and history of mathematics. This course will also emphasize applications to real world situations and the integration of other disciplines, including, but not limited to, business and the physical sciences. Recommendation of the Mathematics Department or at least a grade of “C” in the prerequisite coursework is required.

MGF1107 Survey of Mathematics  
Credit Hours: 3  
This is a general education course which includes college-level skills from a variety of mathematical topics. The course will include the mathematics of finance and at least 3 selected topics from among: linear and exponential functions; number systems; history of mathematics; elementary number theory; graph theory; numerical methods and algorithms; game theory; voting and apportionment theory; and student project(s) (strongly recommended). This course will also emphasize applications to real-world situations and the integration of other academic disciplines, including (but not limited to) business and the physical and social sciences. Meets Area 5A of the General Education Requirements for the A.A. degree. Meets Areas 4 or 5 of the General Education Requirement for the A.S. degree. Recommendation of the Mathematics Department or at least a grade of “C” in the prerequisite course is required.

MHF4404 History of Mathematics  
Credit Hours: 3  
A chronological study of the evolution of mathematical thought from primitive counting to modern ideas. The study will include the development of mathematics through history, the impact of mathematics on society, and how mathematics has broadened our knowledge of the world. Throughout the course students will be shown and
encouraged to discover connections between historical and modern mathematics. The course is designed for math students who want to understand the development of mathematics, teachers of mathematics at all levels, and students who have an interest in social and cultural history.

**MKA1021 Salesmanship**  
Credit Hours: 3
Through a combination of principles and techniques, this course identifies the why, what, how and when of selling. Students develop skills in prospecting, opening the sale, presenting customer benefits, overcoming objections, and closing the sale. Students will prepare an oral sales presentation based on selective criteria of the professor. Note: the DECA Sales Representative contest may be used as an example.

**MKA1511 Advertising: Traditional and New Media**  
Credit Hours: 3
This course introduces the role of advertising in today's and future technology-driven society. The course covers types of advertising including traditional and new media. Course includes promotional objectives, product positioning, creative strategies, types of media, social media platform, and ad agencies in a competitive environment. As a learning activity, students will prepare a product positioning plan.

**MKA1930 Seminar I: Marketing in Perspective**  
Credit Hours: 3
This course includes marketing management related activities including individual research that leads to written and oral presentation competencies. Students may select from a range of current marketing topics such as the US Debt Clock, effects of federal government legislation on business, and consumer buying habits of millennials differentiating from baby boomers. Where possible, the students will have the opportunity to work on projects given to the class by area businesses.

**MKA2042 Retailing**  
Credit Hours: 3
This course provides an introduction to the management functions unique to retail store operations. Special topics include department store organization, shrinkage prevention, store location and layout, shopping centers, and merchandising. Upon successful completion of this course, students shall be able to demonstrate competencies needed in retailing positions at the mid-management and owner-management level.

**MKA2701C Visual Informatics**  
Credit Hours: 3
This course is designed to allow students to implement the important concepts and techniques used to move from simple to complex visualizations of business data. This is a course in applied data collection and presentation.

**MKA2931 Seminar II: Research in Marketing**  
Credit Hours: 3
This course includes marketing management related activities such as individual projects in advertising, promotion, entrepreneurship, marketing research and career planning. Students will expand and enhance the knowledge gained in the prerequisite course Marketing Seminar 1. Students will have the opportunity to develop leadership skills through participation in DECA and related activities.

**MKA2932 Seminar III: Marketing Management**  
Credit Hours: 3
This course includes marketing management related activities such as individual projects in promotion and entrepreneurship, marketing research and career planning. Students will expand and enhance the knowledge gained in the prerequisite course Marketing Seminar 1. Students will have the opportunity to develop leadership skills through participation in DECA and related activities.

**MKA2949 Co-Op Work Experience**  
Credit Hours: 3
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration.

**MLS2811L Microbiology Clinical Practicum**  
Credit Hours: 3
This course consists of an internship at a sponsoring microbiology laboratory clinical site. Supervised activities in
areas of blood and body fluid immunologic analysis are meant to enhance the student's medical laboratory knowledge base with emphasis on professionalism, safety, problem-solving, and quality assurance.

**MLS2930 Seminar**
Selected current topics in Clinical Laboratory Science and related subjects are discussed. These topics will go beyond the introductory Courses in examining specific aspects of the subject matter.

**MLT1022 Introduction to Medical Technology**
Credit Hours: 2
An introduction to the basic principles, techniques, and vocabulary applicable to medical laboratory technology. Emphasizes specimen collection and preservation; urinalysis and clinical microscopy; phlebotomy; introduction to serology; and lab information systems.

**MLT1022L Introduction to Medical Technology Laboratory**
Credit Hours: 1
The laboratory develops laboratory skills related to the basic techniques in medical laboratory technology. Emphasizes specimen collection and preservation; urinalysis and clinical microscopy; phlebotomy; introduction to serology; and lab information systems.

**MLT1040 Phlebotomy**
Credit Hours: 1
This course is a study of methods of obtaining blood specimens for laboratory analysis. Topics include phlebotomy equipment; venipuncture and skin puncture techniques; infection control; quality assurance; and professional, ethical, and legal considerations related to blood drawing.

**MLT1044L Phlebotomy Clinical**
Credit Hours: 1
This course consists of supervised activities in obtaining blood specimens for laboratory analysis. Topics include appropriate use of phlebotomy equipment; venipuncture and skin puncture techniques; infection control; and quality assurance.

**MLT2362 Hematology & Body Fluid Analysis**
Credit Hours: 4
This course is an introductory study of the classification and function of blood cells and clotting proteins in health and disease. Major topics include cell identification, anemias, leukemias, hemostasis and thrombosis, and urine and body fluid analysis.

**MLT2362L Hematology & Body Fluid Analysis Laboratory**
Credit Hours: 2
This laboratory develops laboratory skills related to the classification, maturation, morphology and function of blood cells and clotting proteins in health and disease. Major skills include review of CBC slides, cell identification, anemias, leukemias, hemostasis and thrombosis, and urine and body fluid analysis.

**MLT2400 Medical Microbiology**
Credit Hours: 4
Principles and methods used in clinical microbiology including isolation, identification, and antibiotic susceptibility testing of pathogenic bacteria. Introduction to medical parasitology, mycology, and virology.

**MLT2400L Medical Microbiology Laboratory**
Credit Hours: 3
The laboratory develops laboratory skills related to clinical microbiology including isolation, identification, and antibiotic susceptibility testing of pathogenic bacteria. Develops the technical and critical thinking skills used to evaluate clinical microbiology specimens.

**MLT2530 Immunology/Immunohematology**
Credit Hours: 4
This is a study of immunology, serology, blood banking and transfusion medicine principles and procedures. Antigens, antibodies, and the functions of the immune response are examined in detail.

**MLT2530L Immunology/Immunohematology Laboratory**
Credit Hours: 2
This laboratory develops laboratory skills related to immunology, precipitation reactions, agglutination, labeled immunoassays, serology, blood banking and transfusion medicine principles and procedures. Antigens, antibodies, and the functions of the immune response are demonstrated in detail.
MLT2807L Immunohematology Clinical Practicum  Credit Hours: 3
This course consists of an internship at a sponsoring serology and blood bank laboratory clinical site. Supervised activities in areas of blood and body fluid immunologic analysis are meant to enhance the student's medical laboratory knowledge base with emphasis on professionalism, safety, problem-solving, and quality assurance.

MLT2809L Hematology Clinical Practicum  Credit Hours: 3
This course consists of an internship at a sponsoring hematology laboratory clinical site. Supervised activities in areas of blood and body fluid immunologic analysis are meant to enhance the student's medical laboratory knowledge base with emphasis on professionalism, safety, problem-solving, and quality assurance.

MLT2810L Clinical Chemistry Practicum  Credit Hours: 3
This course consists of an internship at a sponsoring chemistry laboratory clinical site. Supervised activities in areas of blood and body fluid immunologic analysis are meant to enhance the student's medical laboratory knowledge base with emphasis on professionalism, safety, problem-solving, and quality assurance.

MMC1000 Intro to Mass Communication  Credit Hours: 3
Overview of contemporary mass media and its historical background. Includes processes and effects of media messages on the individual and society. Deals with the media industry, its responsibilities, legalities, and careers. Media discussed may include newspapers, magazines, books, radio, television, advertising, public relations, and the movie and recording industries.

MC2121 –Writing Fundamentals for Communicators  Credit Hours: 3
Focuses on composing for print and electronic media web, beginning with the skills necessary to write with clarity and attention to user interactivity. Students will produce polished, published nonfiction work native to new media/new journalism formats. The primary mediamay include blogs, wikis, video compositions, white papers, press releases or other developing formats. Students will also learn to support composing in these primary media with other kinds of networked communication. Instruction will focus on developing advanced rhetorical skills appropriate for new media compositions.

MNA1161 Introduction to Customer Service  Credit Hours: 3
This course provides the student with the basic concepts and current trends in the customer service industry. Through actual case studies, the students analyze organizations which have implemented successful customer service strategies.

MNA1949 Industry Work Experience  Credit Hours: 27
Students with a postsecondary adult vocational certificate or equivalent may receive credit based on departmental review. Credits may apply only to students seeking an A.S. in Industrial Management Technology.

MNA2329 Case Studies in HR Management  Credit Hours: 3
This course uses a case study, experimental/simulated learning approach to build upon and apply human resource management concepts. Students will develop and apply their communication and employee relations skills and problem-solving and decision-making abilities to cases that reflect work-related human resource challenges.

MNA2345 Principles of Supervision  Credit Hours: 3
This course provides an overview of fundamentals of supervision and the management of people. It emphasizes the role of supervision in business organizations by focusing on supervisory processes; examining functions of planning, organizing, staffing, directing, controlling and their relationships to daily responsibilities of the supervisor.

MNA2403 Introduction to Human Resources Law & Regulations  Credit Hours: 3
This course is designed to enable the future HR manager to recognize and address potential legal implications of common workplace situations and to understand and evaluate current trends and issues as they relate to employment law.

MNA2949 CO-OP Work Experience  Credit Hours: 3
A course designed to provide training in a student's field of study through work experience. Students are graded on
the basis of learning objectives and employer evaluations.

**MSL1001 Foundations of Officership**

**Army ROTC:** Examines the unique duties and responsibilities of officers, and the organization and role of the Army, reviews skills pertaining to fitness and communication, and analyzes Army values and expected ethical behavior.

**Credit Hours:** 2

**MSL1002 Basic Leadership**

**Army ROTC:** Presents fundamental leadership concepts and doctrine, student will practice basic skills that underlie effective problem solving and examine the officer experience.

**Credit Hours:** 2

**MSL2101 Individual Leadership Studies**

**Army ROTC:** Develops knowledge of self, self-confidence, individual leadership skills, problem solving and critical thinking skills, and improves communication and conflict resolution skills.

**Credit Hours:** 2

**MSL2102 Leadership & Teamwork**

**Army ROTC:** Focuses on self-development by gaining knowledge of self and group processes and by challenging current beliefs, knowledge and skills.

**Credit Hours:** 2

**MTB1310 Applied Mathematics**

This course is designed for Associate of Science degree seeking students. The following topics are included: the metric system and measurement; linear and quadratic functions; ratios and proportions; exponents and logarithms; and descriptive statistics. Problem solving and applications requiring a calculator will be presented throughout the course.

**Credit Hours:** 3

**MTB1370 Math Topics for Health-Related Professions**

This course provides an intensive review of mathematics operations involving fractions, decimals, percentages, ratios, and proportions. Units and measures in apothecaries, metric, and household systems are also discussed with a major emphasis on application for the calculation of both oral and parenteral drug dosages.

**Credit Hours:** 1

**MTE1004C Introduction to Marine Technology**

Course provides the student with the basic skills needed in repairing the marine engine. Hands-on training includes safety rules and regulations; use of tools, identification of fasteners, gaskets, and seals; use of parts and electrical symbols for wiring diagrams.

**Credit Hours:** 3

**MTE1018C Rigging & Make Ready**

Preparation and deliverable of sales merchandise, mounting of various accessories, rigging cables, wiring, control boxes; minor maintenance and lubrication of systems are covered.

**Credit Hours:** 3

**MTE1040C Marine Diesel Engines I**

Course provides theory and hands-on application of the marine diesel engine and related systems. Instruction includes disassembly, reassembly, inspection, cleaning and troubleshooting engine parts and systems.

**Credit Hours:** 3

**MTE1062C Marine Corrosion & Prevention**

Upon completion of this course, students will be able to describe the basic theory of galvanic, electrolysis, fatigue, biological cavitation, and chemical corrosion as it pertains to the marine industry. Zinc sacrificial and impressed current commercial control systems are demonstrated and discussed. Composition, structure, application, and evaluation of commercial classes of protective coating for metals, proper metal preparation, and coating applications are covered. Classroom instruction and tasks performed will be in accordance with applicable American Boat and Yacht Council (ABYC) Standards and industry best practices.

**Credit Hours:** 3

**MTE1073C Gasoline Engine Diagnostics & Repair**

A course on four and two-cycle in-line, and V-type inboard and outboard gasoline engines. Labs include troubleshooting with various kinds of test equipment, disassembly, and inspection and cleaning of various types of
inboard gas engines by major manufacturers.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTE1167C</td>
<td>Marine Fuel Systems, Diesel &amp; Gas</td>
<td>3</td>
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<tr>
<td></td>
<td>Course provides theory, operation, and service of gasoline and</td>
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<tr>
<td></td>
<td>diesel fuel systems as well as conventional systems and</td>
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<td>characteristics of fuels and their oil mixture; safety;</td>
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<td></td>
<td>marine carburetors, tank construction and installation; and</td>
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<td>troubleshooting test equipment using a dynometer.</td>
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<tr>
<td>MTE1312C</td>
<td>Advanced Marine Composites, Painting &amp; Refinish</td>
<td>3</td>
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<tr>
<td></td>
<td>Principles of advanced composite marine construction and repair.</td>
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<tr>
<td></td>
<td>Painting and refinishing surface fundamentals.</td>
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<tr>
<td>MTE1400C</td>
<td>Marine Electricity</td>
<td>3</td>
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<tr>
<td></td>
<td>Basic electrical theory for both AC and DC circuits in marine</td>
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<tr>
<td></td>
<td>systems. Application of electrical theory to the generating,</td>
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<td></td>
<td>starting and auxiliary circuits of the marine engine. Emphasis on</td>
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<td>theory of operation and repair of equipment in the field with</td>
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<td>special attention to marine problems in salt-water environments.</td>
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<tr>
<td>MTE1542C</td>
<td>Air Conditioning &amp; Refrigeration Systems</td>
<td>3</td>
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<tr>
<td></td>
<td>Principles of air conditioning and refrigeration systems on</td>
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<td></td>
<td>marine vessels.</td>
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<tr>
<td>MTE1543C</td>
<td>Marine Auxiliary 2</td>
<td>3</td>
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<td></td>
<td>This course develops skills in the student to prepare it, for</td>
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<td>the installation, reparation, diagnosis and inspection of systems</td>
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<td>such as: Auxiliary Power Systems, Hydraulic systems, Bow and</td>
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<td>Stern thruster’s systems, Windlass anchor systems, Desalination</td>
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<td>systems and A/C Systems. The theory is complemented by projects in</td>
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<td></td>
<td>the laboratory, which help the student with the familiarization</td>
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<tr>
<td></td>
<td>of the processes of installation and repair. At the end of the</td>
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<td>course the student will be ready to take the ABYC &quot;Systems&quot;</td>
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<tr>
<td></td>
<td>certification exam.</td>
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<tr>
<td>MTE1651C</td>
<td>Basic Welding</td>
<td>4</td>
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<tr>
<td></td>
<td>Provides basic welding knowledge and skills necessary to make</td>
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<td>repairs on ferrous materials used in the marine industry.</td>
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<td></td>
<td>Emphasis on metallurgy and uses of metals. The course is</td>
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<td>designed for the student with no welding background and includes</td>
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<td></td>
<td>the safety and theory of gas welding, metal cutting, brazing</td>
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<td></td>
<td>with brass and silver alloys, AC/DC arc welding stick, and</td>
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<td></td>
<td>introduction to aluminum TIG and MIG welding.</td>
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<tr>
<td>MTE2041C</td>
<td>Diesel Engines II</td>
<td>3</td>
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<tr>
<td></td>
<td>Advanced theory of operation of diesel engines with an</td>
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<td>understanding of ABYC standards and recommended practices for</td>
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<td></td>
<td>systems.</td>
<td></td>
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<tr>
<td>MTE2234C</td>
<td>Marine Inboard/Outboard Sail drive &amp; Transmission</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Course provides instruction on large outboard lower units, stem</td>
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<tr>
<td></td>
<td>drives and marine gear assemblies of various manufacturers.</td>
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<tr>
<td></td>
<td>Complete disassembly and reassembly procedures on outboard</td>
<td></td>
</tr>
<tr>
<td></td>
<td>lower units. The study of hydraulics in transmissions and theory</td>
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<tr>
<td></td>
<td>of propellers.</td>
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<tr>
<td>MTE2420C</td>
<td>Advanced Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Advanced electrical systems and troubleshooting procedures,</td>
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<tr>
<td></td>
<td>diagnosis and repair of circuits and equipment</td>
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<tr>
<td></td>
<td>malfunctions on marine vessels.</td>
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<tr>
<td>MTE2490C</td>
<td>Marine Electronics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Principles of on-board electronic systems, installation and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>troubleshooting of communication and navigational systems.</td>
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<tr>
<td>MTE2541C</td>
<td>Marine Auxiliary Equipment</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>This course provides an introduction to centrifugal pumps; AC</td>
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<tr>
<td></td>
<td>electricity and generators; hydraulic; air conditioning; and</td>
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<tr>
<td></td>
<td>refrigeration systems. Theory of operation and fundamentals of</td>
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<tr>
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<td>servicing are taught with a strong emphasis on</td>
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</tbody>
</table>
techniques.

**MTE2949 Marine Internship**  
Credit Hours: 2  
Internship co-operative course providing on-the-job training at a local marine repair station. Includes required student outcomes which meet industry standards.

**MTG3212 Modern Geometry**  
Credit Hours: 3  
A course for math and math education majors. Geometry is a major foundation of our mathematical understanding of the world, and this course will explore both its breadth and depth. This course rigorously examines the axioms and theorems of Euclidean geometry and the non-Euclidean geometries. The coordinate and translational geometries will be treated as well. This course is highly theoretical and proof-intensive.

**MUE1440 String Class**  
Credit Hours: 1  
Development of elementary performing skills on the violin. A basic study of all string instruments. Examines literature and teaching techniques for group instruction of students.

**MUE1450 Woodwind Class**  
Credit Hours: 1  
Development of elementary performing skills on the clarinet. A basic study of all woodwind instruments. Examines literature and teaching techniques for group instruction of students.

**MUH2019 Development of American Popular Music**  
Credit Hours: 3  
Popular music in the United States, from 1820 to the present, examining various musical styles including Theater and Stage Music, Jazz, Blues, Rock and Roll, Folk and Country, Punk, Hip-Hop, and beyond. This is an International/Intercultural course.

**MUH2111 Music History & Literature I: Medieval to Classical**  
Credit Hours: 3  
A survey course tracing the historical development of Western music from Medieval to the Classical Periods. Emphasis is placed on major composers and their works. This is an International/Intercultural competency course.

**MUH2112 Music History & Literature II: Romantic to Modern**  
Credit Hours: 3  
A survey course tracing the history of music from the beginning of the 19th century to the present, showing the significance of music development resulting from social, international and cultural influences. This is an International/Intercultural competency course.

**MUL2010 Music Appreciation**  
Credit Hours: 3  
Course for non-music majors, designed to develop a basic music vocabulary, establish critical listening skills, and survey the evolution of Western music within a framework of world cultures. This is an International/Intercultural competency course.

**MUM1600C Introduction to Recording Studio Procedures**  
Credit Hours: 3  
Fundamentals and techniques of modern multi-track recording. Areas of concentration are studio procedures, equipment operation, microphone selection and placement, signal processors, musical instrument isolation, and acoustical properties.

**MUM2601C Advanced Recording Engineering**  
Credit Hours: 3  
This class focuses on advanced application of recording and mix-down techniques, incorporating the use of overdubs and special effects. A multi-track recording project will be required.

**MUM2602C Mixing, Mastering, & Delivery**  
Credit Hours: 3  
Mixing, mastering, and delivery.

**MUM2620C Acoustics & Audio Electronics**  
Credit Hours: 2  
This course is a survey of acoustical phenomena relating to music. It will also explore the fundamentals of analog and
digital audio. Topics include recording consoles, principles of signal processing, an introduction to microphone and loudspeaker technology, and an introduction to music production and recording techniques in both analog and digital media. Class meetings consist of lecture sessions combined with in-class demonstration and some student hands-on training. Assignment-based laboratory time is required.

**MUM2640C Post Production Sound**
Credit Hours: 3
This course will explore the production and post production aspects of sound as related to film and television. Topics include mixing and mastering video soundtracks, automated dialogue replacement, sound effects, Foley, music, and sound design.

**MUM2700 Introduction to Music Business**
Credit Hours: 3
An introduction to the history, principles and practices of the music industry. A systematic survey of the career options in the music industry. Topics include recording, publishing, licensing, copyrights, promotions, arts managements, music and instrument merchandising, contracts, music in mass communication, the internet and the music industry, live performance on a local and national basis, career options and career development with emphasis on commercial enterprise.

**MUM2730 Music Marketing & Promotion**
Credit Hours: 3
Music business marketing is a multifaceted and integrated approach that will teach the student an effective worldwide music marketing strategy and how to plan their active marketing plan tailored to the student's strengths and budget. The student will learn to: time a marketing campaign effectively; publicize music effectively for traditional print and emerging online outlets; understand the current opportunities for online, satellite and terrestrial radio play; and navigate various retail and distribution options such as iTunes, Rhapsody, Amazon.com as well as brick and mortar outlets. Students will learn to maximize profitability of touring efforts and avoid common mistakes in music marketing.

**MUN1120 Band**
Credit Hours: 1
Open to all students, faculty, and members of the community who play a band instrument. Chairs assigned by the conductor through audition. Three-hour rehearsal weekly. May be taken four times for transfer credit.

**MUN1180 Concert Band**
Credit Hours: 1
Open to all students, faculty and members of the community who play a band instrument. Chairs assigned by the conductor through audition. Three-hour rehearsal weekly. May be taken four times for transfer credit.

**MUN1210C Symphony Orchestra**
Credit Hours: 1
Open by audition to all students, faculty and members of the community who play an orchestral instrument. Chairs assigned by the conductor. Three hours rehearsal weekly. May be taken four times for transfer credit.

**MUN1280C Orchestra**
Credit Hours: 1
Open by audition to all students, faculty, and members of the community who play an orchestral instrument. Chairs assigned by the conductor. Three hours rehearsal weekly. May be taken four times for transfer credit.

**MUN1310 College Singers**
Credit Hours: 1
Open to all college students by audition. Three hours rehearsal weekly. May be take four times for transfer credit.

**MUN1340C Vocal Ensemble**
Credit Hours: 1
A select vocal ensemble performing a wide variety of literature, including Jazz and Pop. Open to all students by audition. May be taken four times for transfer credit.

**MUN1341C Seahawk Singers**
Credit Hours: 1
A select vocal ensemble performing a variety of literature including jazz and pop. Open to all students by audition. May be taken four times for transfer credit.

**MUN1380C Broward Choral Society**
Credit Hours: 1
Open to all student, faculty and members of the community who have experience in the art of singing. Three hours rehearsal weekly. May be taken four times for transfer credit.

**MUN1430C Brass Ensemble**  
Credit Hours: 1  
A select instrumental ensemble that performs music written or arranged for Brass instruments. Enrollment is determined by the director through audition. May be taken four times for transfer credit.

**MUN1440C Percussion Ensemble**  
Credit Hours: 1  
A select instrumental ensemble that performs music written or arranged for Percussion instruments. Enrollment is determined by the director through audition. May be taken four times for transfer credit.

**MUN1460C Chamber Ensemble**  
Credit Hours: 1  
Small group whose members are selected by the director through audition. Study and performance of repertoire appropriate to the specific chamber media. Three hours rehearsal weekly. May be taken four times for transfer credit.

**MUN1480C Classical Guitar Ensemble**  
Credit Hours: 1  
Open to all students, faculty and members of the community who play guitar. Enrollment is determined by the director through audition. Participants will study and perform music from all periods in preparation for public performance. May be taken four times for transfer credit.

**MUN1481C Jazz Guitar Ensemble**  
Credit Hours: 1  
Open to all students, faculty and members of the community who play guitar. Enrollment is determined by the director through audition. Participants will study and perform music of various styles in preparation for public performance. May be taken four times for transfer credit.

**MUN1710C Jazz Ensemble**  
Credit Hours: 1  
Enrollment is determined by the director through audition. Study and performance of music associated with the popular music and show presentation fields. May be taken four times for transfer credit.

**MUN1711 Jazz Combo**  
Credit Hours: 1  
Enrollment is determined by the director through audition. Study and performance of music associated with the popular music and show presentation fields. May be taken four times for transfer credit.

**MUN1712 Combo Laboratory**  
Credit Hours: 1  
Enrollment is determined by the director through audition. Study and performance of music associated with the popular music and show presentation fields. May be taken four times for transfer credit.

**MUN1780C Jazz/Pop Ensemble**  
Credit Hours: 1  
Enrollment is determined by the director through audition. Study and performance of music associated with the popular music, show presentation and dance band fields. May be taken four times for transfer credit.

**MUS1360 Introduction to Music Technology**  
Credit Hours: 1  
This class is an introductory survey of the fundamental aspects of music technology. Topics include use of microphones, digital audio, sound f/x, music notation programs and recording studio layout.

**MUS2332C Live Sound Reinforcement**  
Credit Hours: 3  
This course explores techniques used for recording and reinforcing music on location. Topics include commonly encountered acoustical problems and an investigation of equipment and techniques used to overcome them.

**MUS2342C Digital Audio Music Production**  
Credit Hours: 3  
Upon completion of this course the student will have acquired a deep understanding of desktop music production. The physical aspects of sound, digital audio technology and studio production techniques will be explained and demonstrated in detail. Topics covered in class will include non-linear editing, digital signal processing, an introduction to MIDI and sequencing, concepts of signal flow, sound effects, basic mixing, and basic recording
techniques. Studio Laboratory assignments are performed outside of class reinforcing weekly lecture topics.

**MUS2344C Introduction to MIDI Systems & Sound Design**
Credit Hours: 3
This course will offer the student a comprehensive study of the Musical Instrument Digital Interface (MIDI) and its many musical applications with an emphasis on sequencing and sound design. Concepts of music synthesis and sound design are presented through the use of a computer, keyboard, and appropriate software.

**MUS2348C Digital Audio Music Production II**
Credit Hours: 3
This course explores techniques used for recording and reinforcing music on location. Topics include commonly encountered acoustical problems and an investigation of equipment and techniques used to overcome them.

**MUS2349C Advanced Projects in Music Production**
Credit Hours: 3
This course will offer the student a comprehensive overview of the music production process, including composing, tracking, mixing, advanced synthesis techniques and delivery.

**MUS2905 Independent Study: Music**
Credit Hours: 3
A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to music. Prerequisite: Instructor approval. Students will shape the course to fit their needs by planning activities with a faculty advisor.

**MUS2930 MUSIC: Special Topics**
Credit Hours: 3
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Topics will be identified by the MUS2930 course title published in the course schedules for each term that the course is offered. Special Topics credit hours are not automatically transferable. Transfer credit is the prerogative of the receiving institution.

**MUT1001 Fundamentals of Music**
Credit Hours: 3
A study of basic music fundamentals for the non-music major or the beginning music major whose background in music has been minimal. This is an International/Intercultural competency course.

**MUT1111 Music Theory I**
Credit Hours: 3
A course on music theory and related keyboard skills. Emphasis on diatonic materials.

**MUT1112 Music Theory II**
Credit Hours: 3
A continuation of MUT1111.

**MUT1241 Ear Training & Sight Singing I**
Credit Hours: 1
A course in the development of sight singing and ear training skills.

**MUT1242 Ear Training & Sight Singing II**
Credit Hours: 1
A continuation of MUT1241.

**MUT1271C Musicianship for Music Technology I**
Credit Hours: 3
Designed for the music technology student, this class will explore the basic musical concepts of rhythm, melody, and harmony. Additional topics will include notation, sight singing, and song form. Keyboard skills are also developed.

**MUT1272C Musicianship for Music Technology II**
Credit Hours: 3
A continuation of the concepts presented in MUT1271C. This course focuses on further development of music theory,
sight singing, and keyboard skills.

**MUT2116 Music Theory III**  
Continuation of MUT1112. Concentration on chromatic materials, musical forms, and 20th century techniques.  
Credit Hours: 3

**MUT2117 Music Theory IV**  
Continuation of MUT2116.  
Credit Hours: 3

**MUT2246 Ear Training & Sight Singing III**  
A continuation of MUT1242.  
Credit Hours: 1

**MUT2247 Ear Training & Sight Singing IV**  
A continuation of MUT2246.  
Credit Hours: 1

**MUT2641 Jazz Theory & Improvisation I**  
A study of the materials and structure of jazz music and the development of improvisational skills.  
Credit Hours: 3

**MUT2642 Jazz Theory & Improvisation II**  
A study of the materials and structure of jazz music and the development of improvisational skills.  
Credit Hours: 3

**MVB1011 Pre-Principal Trumpet**  
College preparatory applied instruction in Trumpet for the music principal. One hour lesson per week and two hours practice daily.  
Credit Hours: 1

**MVB1012 Pre-Principal French Horn**  
College preparatory applied instruction in French horn for the music principal. One hour lesson per week and two hours practice daily.  
Credit Hours: 1

**MVB1013 Pre-Principal Trombone**  
College preparatory applied instruction in trombone for the music principal. One hour lesson per week and two hours practice daily.  
Credit Hours: 1

**MVB1014 Pre-Principal Baritone Horn**  
College preparatory applied instruction in baritone horn for the music principal. One hour lesson per week and two hours practice daily.  
Credit Hours: 1

**MVB1015 Pre-Principal Tuba**  
College preparatory applied instruction in tuba for the music principal. One hour lesson per week and two hours practice daily.  
Credit Hours: 1

**MVB1211 Trumpet**  
One half-hour lesson weekly and one hour of practice daily.  
Credit Hours: 1

**MVB1212 French Horn**  
One half-hour lesson weekly and one hour of practice daily.  
Credit Hours: 1

**MVB1213 Trombone**  
One half-hour lesson weekly and one hour of practice daily.  
Credit Hours: 1

**MVB1214 Baritone Horn**  
One half-hour lesson weekly and one hour of practice daily.  
Credit Hours: 1

**MVB1215 Tuba**  
One half-hour lesson weekly and one hour of practice daily.  
Credit Hours: 1

**MVB1311 Principal Trumpet I**  
Credit Hours: 1
Applied instruction in trumpet for the music principal. One hour lesson per week and two hours practice daily.

**MVB1312 Principal French Horn I**  
Credit Hours: 1  
Applied instruction in French horn for the music principal. One hour lesson per week and two hours practice daily.

**MVB1313 Principal Trombone I**  
Credit Hours: 1  
Applied instruction in trombone for the music principal. One hour lesson per week and two hours practice daily.

**MVB1314 Principal Baritone Horn I**  
Credit Hours: 1  
Applied instruction in baritone horn for the music principal. One hour lesson per week and two hours practice daily.

**MVB1315 Principal Tuba I**  
Credit Hours: 1  
Applied instruction in tuba for the music principal. One hour lesson per week and two hours practice daily.

**MVB2221 Trumpet**  
Credit Hours: 1  
One half hour lesson weekly and one hour of practice daily.

**MVB2222 French Horn**  
Credit Hours: 1  
One half hour lesson weekly and one hour practice daily.

**MVB2223 Trombone**  
Credit Hours: 1  
One half hour lesson weekly and one hour of practice daily.

**MVB2224 Baritone Horn**  
Credit Hours: 1  
One half hour lesson weekly and one hour of practice daily.

**MVB2225 Tuba**  
Credit Hours: 1  
One half hour lesson weekly and one hour of practice daily.

**MVB2321 Principal Trumpet II**  
Credit Hours: 1  
Applied instruction in trumpet for the music principal. One hour lesson per week and two hours practice daily.

**MVB2322 Principal French Horn II**  
Credit Hours: 1  
Applied instruction in French horn for the music principal. One hour lesson per week and two hours practice daily.

**MVB2323 Principal Trombone II**  
Credit Hours: 1  
Applied instruction in trombone for the music principal. One hour lesson per week and two hours practice daily.

**MVB2324 Principal Baritone Horn II**  
Credit Hours: 1  
Applied instruction in baritone horn for the music principal. One hour lesson per week and two hours practice daily.

**MVB2325 Principal Tuba II**  
Credit Hours: 1  
Applied instruction in tuba for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1010 Pre-Principal Jazz Piano**  
Credit Hours: 1  
College preparatory applied instruction in jazz piano for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1011 Pre-Principal Jazz Voice**  
Credit Hours: 1  
College preparatory applied instruction in jazz voice for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1013 Pre-Principal Jazz Guitar**  
Credit Hours: 1
College preparatory applied instruction in jazz guitar for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1014 Pre-Principal Electric Bass**  Credit Hours: 1
College preparatory applied instruction in electric bass for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1019 Pre-Principal Jazz Percussion**  Credit Hours: 1
College preparatory applied instruction in jazz percussion for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1210 Jazz Piano/Secondary**  Credit Hours: 1
One half-hour lesson weekly and one hour of practice daily.

**MVJ1211 Jazz Voice Secondary**  Credit Hours: 1
One half-hour lesson weekly and one hour of practice daily.

**MVJ1213 Jazz Guitar/Secondary**  Credit Hours: 1
One half-hour lesson weekly and one hour of practice daily.

**MVJ1214 Electric Bass/Secondary**  Credit Hours: 1
One hour lesson weekly and two hours of practice daily.

**MVJ1219 Jazz Percussion**  Credit Hours: 1
One half-hour lesson weekly and one hour of practice daily.

**MVJ1310 Principal Jazz Piano I**  Credit Hours: 1
Applied instruction in jazz piano for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1311 Principal Jazz Voice I**  Credit Hours: 1
Applied instruction in jazz voice for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1313 Principal Jazz Guitar I**  Credit Hours: 1
Applied instruction in jazz guitar for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1314 Principal Electric Bass I**  Credit Hours: 1
Applied instruction in electric bass for the music principal. One hour lesson per week and two hours practice daily.

**MVJ1319 Principal Jazz Percussion I**  Credit Hours: 1
Applied instruction in jazz percussion for the music principal. One hour lesson per week and two hours practice daily.

**MVJ2220 Jazz Piano**  Credit Hours: 1
One half-hour lesson weekly and one hour of practice daily.

**MVJ2223 Jazz Guitar**  Credit Hours: 1
One half-hour lesson weekly and one hour of practice daily.

**MVJ2224 Electric Bass**  Credit Hours: 1
One half-hour lesson weekly and one hour of practice daily.

**MVJ2229 Jazz Percussion**  Credit Hours: 1
One half-hour lesson weekly and one hour of practice daily.

**MVJ2320 Principal Jazz Piano II**  Credit Hours: 1
Applied instruction in jazz piano for the music principal. One hour lesson per week and two hours practice daily.

**MVJ2323 Principal Jazz Guitar II**  
Applied instruction in jazz guitar for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVJ2324 Principal Electric Bass II**  
Applied instruction in electric bass for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVJ2329 Principal Jazz Percussion II**  
Applied instruction in jazz percussion for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVK1011 Pre-Principal Piano**  
College preparatory applied instruction in piano for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVK1013 Pre-Principal Organ**  
College preparatory applied instruction in organ for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVK1111 Piano Class**  
Basic piano skills for the beginning student.  
**Credit Hours:** 1

**MVK1112 Piano Class II**  
(Two hours weekly) basic piano skills for the intermediate student.  
**Credit Hours:** 1

**MVK1211 Piano**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVK1213 Organ**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVK1311 Principal Piano I**  
Applied instruction in piano for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVK1313 Principal Organ I**  
Applied instruction in organ for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVK2221 Piano**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVK2223 Organ**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVK2321 Principal Piano II**  
Applied instruction in piano for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVK2323 Principal Organ II**  
Applied instruction in organ for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVO1070 Applied Music Jazz Coaching**  
Applied music jazz coaching on the student's instrument. One hour lesson per week and two hours practice daily. By permission of the instructor.  
**Credit Hours:** 1
**MVP1011 Pre-Principal Percussion**
College preparatory applied instruction in percussion for the music principal. One hour lesson per week and two hours practice daily.

**MVP1211 Percussion**
One half hour lesson weekly and one hour of practice daily.

**MVP1311 Principal Percussion I**
Applied instruction in percussion for the music principal. One hour lesson per week and two hours practice daily.

**MVP2221 Percussion**
One half hour lesson weekly and one hour of practice daily.

**MVP2321 Principal Percussion II**
Applied instruction in percussion for the music principal. One hour lesson per week and two hours practice daily.

**MVS1011 Pre-Principal Violin**
College preparatory applied instruction in violin for the music principal. One hour lesson per week and two hours practice daily.

**MVS1012 Pre-Principal Viola**
College preparatory applied instruction in viola for the music principal. One hour lesson per week and two hours practice daily.

**MVS1013 Pre-Principal Cello**
College preparatory applied instruction in cello for the music principal. One hour lesson per week and two hours practice daily.

**MVS1014 Pre-Principal String Bass**
College preparatory applied instruction in string bass for the music principal. One hour lesson per week and two hours practice daily.

**MVS1015 Pre-Principal Harp**
College preparatory applied instruction in harp for the music principal. One hour lesson per week and two hours practice daily.

**MVS1016 Pre-Principal Classical Guitar**
College preparatory applied instruction in classical guitar for the music principal. One hour lesson per week and two hours practice daily.

**MVS1116 Guitar Class**
Class instruction in beginning classical guitar techniques.

**MVS1211 Violin**
One half hour lesson weekly and one hour of practice daily.

**MVS1212 Viola**
One half hour lesson weekly and one hour of practice daily.

**MVS1213 Cello**
One half hour lesson weekly and one hour of practice daily.

**MVS1214 String Bass**
One half hour lesson weekly and one hour of practice daily.

**MVS1215 Harp**
One half hour lesson weekly, and one hour of practice daily.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MVS1216</td>
<td>Classical Guitar</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVS1311</td>
<td>Principal Violin I</td>
<td>1</td>
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<tr>
<td></td>
<td>Applied instruction in violin for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS1312</td>
<td>Principal Viola I</td>
<td>1</td>
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<tr>
<td></td>
<td>Applied instruction in viola for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS1313</td>
<td>Principal Cello I</td>
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<td></td>
<td>Applied instruction in cello for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS1314</td>
<td>Principal String Bass I</td>
<td>1</td>
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<tr>
<td></td>
<td>Applied instruction in string bass for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS1315</td>
<td>Harp</td>
<td>1</td>
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<td></td>
<td>One hour lesson weekly, and two hours of practice daily. Class offered on demand.</td>
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<tr>
<td>MVS1316</td>
<td>Principal Classical Guitar I</td>
<td>1</td>
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<tr>
<td></td>
<td>Applied instruction in classical guitar for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS2126</td>
<td>Guitar Class</td>
<td>1</td>
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<tr>
<td></td>
<td>Class instruction in intermediate guitar techniques.</td>
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<tr>
<td>MVS2221</td>
<td>Violin</td>
<td>1</td>
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<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVS2222</td>
<td>Viola</td>
<td>1</td>
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<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVS2223</td>
<td>Cello</td>
<td>1</td>
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<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVS2224</td>
<td>String Bass</td>
<td>1</td>
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<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVS2225</td>
<td>Harp Secondary</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>One half hour lesson weekly, and one hour of practice daily. This course offered on demand.</td>
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<tr>
<td>MVS2226</td>
<td>Classical Guitar</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVS2321</td>
<td>Principal Violin II</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Applied instruction in violin for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS2322</td>
<td>Principal Viola II</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Applied instruction in viola for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS2323</td>
<td>Principal Cello II</td>
<td>1</td>
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<tr>
<td></td>
<td>Applied instruction in cello for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS2324</td>
<td>Principal String Bass II</td>
<td>1</td>
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<tr>
<td></td>
<td>Applied instruction in string bass for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours:</td>
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<tr>
<td>MVS2325</td>
<td>Principal Sophomore Harp</td>
<td>1</td>
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<tr>
<td></td>
<td>Applied instruction in harp for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVS2326</td>
<td>Principal Classical Guitar II</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Applied instruction in classical guitar for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVV1011</td>
<td>Pre-Principal Voice</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>College preparatory applied instruction in voice for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVV1111</td>
<td>Voice Class</td>
<td>1</td>
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<tr>
<td></td>
<td>Fundamentals of voice production and building of solo repertoire.</td>
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<tr>
<td>MVV1211</td>
<td>Voice</td>
<td>1</td>
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<tr>
<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVV1311</td>
<td>Principal Voice I</td>
<td>1</td>
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<tr>
<td></td>
<td>Applied instruction in voice for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVV2221</td>
<td>Voice</td>
<td>1</td>
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<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVV2321</td>
<td>Principal Voice II</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Applied instruction in voice for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVW1011</td>
<td>Pre-Principal Flute</td>
<td>1</td>
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<tr>
<td></td>
<td>College preparatory applied instruction in flute for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVW1012</td>
<td>Pre-Principal Oboe</td>
<td>1</td>
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<tr>
<td></td>
<td>College preparatory applied instruction in oboe for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVW1013</td>
<td>Pre-Principal Clarinet</td>
<td>1</td>
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<tr>
<td></td>
<td>College preparatory applied instruction in clarinet for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVW1014</td>
<td>Pre-Principal Bassoon</td>
<td>1</td>
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<tr>
<td></td>
<td>College preparatory applied instruction in bassoon for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVW1015</td>
<td>Pre-Principal Saxophone</td>
<td>1</td>
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<tr>
<td></td>
<td>College preparatory applied instruction in saxophone for the music principal. One hour lesson per week and two hours practice daily.</td>
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<tr>
<td>MVW1211</td>
<td>Flute</td>
<td>1</td>
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<tr>
<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVW1212</td>
<td>Oboe</td>
<td>1</td>
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<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVW1213</td>
<td>Clarinet</td>
<td>1</td>
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<tr>
<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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<tr>
<td>MVW1214</td>
<td>Bassoon</td>
<td>1</td>
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<td></td>
<td>One half hour lesson weekly and one hour of practice daily.</td>
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</tbody>
</table>
One half hour lesson weekly and one hour of practice daily.

**MVW1215 Saxophone**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVW1311 Principal Flute I**  
Applied instruction in flute for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW1312 Principal Oboe I**  
Applied instruction in oboe for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW1313 Principal Clarinet I**  
Applied instruction in clarinet for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW1314 Principal Bassoon I**  
Applied instruction in bassoon for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW1315 Principal Saxophone I**  
Applied instruction in saxophone for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW2221 Flute**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVW2222 Oboe**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVW2223 Clarinet**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVW2224 Bassoon**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVW2225 Saxophone**  
One half hour lesson weekly and one hour of practice daily.  
**Credit Hours:** 1

**MVW2321 Principal Flute II**  
Applied instruction in flute for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW2322 Principal Oboe II**  
Applied instruction in oboe for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW2323 Principal Clarinet II**  
Applied instruction in clarinet for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW2324 Principal Bassoon II**  
Applied instruction in bassoon for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**MVW2325 Principal Saxophone II**  
Applied instruction in saxophone for the music principal. One hour lesson per week and two hours practice daily.  
**Credit Hours:** 1

**NMT1002 Intro to Nuclear Medicine Technology**  
This course is designed to introduce the student to the field of nuclear medicine. Upon completion of this course, the  
**Credit Hours:** 3
student will have knowledge upon vital signs, patient care, universal precautions, and phlebotomy. The student will also receive a brief overview on radiation safety and the most common procedures performed in nuclear medicine.

NMT1002L Introduction to Nuclear Medicine Laboratory  Credit Hours: 1
The student will be introduced to aspects of the healthcare field and the fundamentals of nuclear medicine by applying the skills learned in Introduction to Nuclear Medicine to fully prepare the student for the hospital and/or clinical site.

NMT1430 Radiation Safety & Radiobiology  Credit Hours: 3
This course is designed to educate students on the biological effects of radiation and also informs the student on the local, state and federal regulations regarding radiation protection and safety for themselves, others and the environment. The students will learn how to follow appropriate protection procedures; dose limits, the long and short term effects of radiation, and how to handle and dispose of radioactive materials; and practice personnel monitoring of radiation exposure.

NMT1630 Nuclear Medicine Physics and Mathematical Applications  Credit Hours: 2
This course educates the student on the fundamentals of nuclear physics including nuclear terminology and important photon interactions that interplay with common radioisotopes used in Nuclear Medicine. The student will also gain knowledge of the various calculations necessary for a successful nuclear medicine technologist to attain.

NMT1714 Nuclear Medicine Pathology  Credit Hours: 3
This course introduces the student to general pathological conditions with emphasis on those commonly seen in the field of nuclear medicine. Basic anatomy is reviewed in correlation to pathophysiology of disease. Descriptions of how diseases are classified, diagnosed and treated, as well as the natural course/prognosis of these diseases are presented. Topics will include; Pathogenesis, disease classification systems, and the study of specific disease of the respiratory, skeletal, gastrointestinal, hepatobiliary, urinary, cardiovascular & hematopoietic, nervous, endocrine and reproductive systems with nuclear medicine imaging considerations.

NMT1804 Nuclear Medicine Clinical Education I  Credit Hours: 2
This course introduces the student to general pathological conditions with emphasis on those commonly seen in the field of nuclear medicine. Basic anatomy is reviewed in correlation to pathophysiology of disease. Descriptions of how diseases are classified, diagnosed and treated, as well as the natural course/prognosis of these diseases are presented. Topics will include; Pathogenesis, disease classification systems, and the study of specific disease of the respiratory, skeletal, gastrointestinal, hepatobiliary, urinary, cardiovascular and hematopoietic, nervous, endocrine and reproductive systems with nuclear medicine imaging considerations.
NMT1814 Nuclear Medicine Clinical Education II Credit Hours: 2
Second in a four-course sequence of supervised clinical instruction in nuclear medicine technology. In addition to topics covered in Clinical Education I, the student is expected to perform routine quality control and some imaging procedures. Students must successfully complete a required number of competencies as stated in the clinical syllabi for the respective semester.

NMT1900 Nuclear Medicine Imaging Anatomy Credit Hours: 2
This course is designed to present anatomy and its importance to the Nuclear Medicine student who will be utilizing this knowledge in the clinical field for classification of diagnoses, procedures, and diagnostic services rendered to patients in the healthcare environment.

NMT2061 Nuclear Medicine Seminar Credit Hours: 3
This course challenges the student with comprehensive testing, discussions and refinement of their accumulated knowledge of all aspects of Nuclear Medicine technology in preparation for the National Board Examinations.

NMT2102 Nuclear Medicine Administration Credit Hours: 1
The student will be introduced to the administrative duties required of a Nuclear Medicine Technologist. Upon completion, the student will attain knowledge of proper resume building skills, interviewing skills, stress management and overall successful in the healthcare field.

NMT2130 Nuclear Medicine Radio Pharmacy Credit Hours: 2
This course will educate the student upon all aspects of all the radiopharmaceuticals used in Nuclear Medicine and PET. The student will understand how radiopharmaceuticals are produced, to maintain radiopharmaceuticalal records; obtain a generator eluate; prepare radiopharmaceuticals and perform quality control tests on them; dispose of radioactive waste appropriately; demonstrate an understanding of ordering pharmaceuticals in appropriate dosage and at an effective time frame.

NMT2534 Nuclear Medicine Instrumentation Credit Hours: 3
This class incorporates the principles of nuclear physics associated with the operation and calibration of radiation detection devices applied in nuclear medicine. Students will have a hands-on approach to the various types of devices and equipment that are commonly used in nuclear medicine. Students will be educated on quality control testing of imaging and non-imaging systems; which also include SPECT, PET, and CT applications.

NMT2713 Nuclear Medicine Methodology I Credit Hours: 3
This is the first in a series of two Courses which thoroughly educate the student about nuclear medicine imaging procedures to allow the student proper execution of these procedures during clinical rotation. The student will also demonstrate knowledge of respective PET imaging procedures frequently performed.

NMT2713L Nuclear Medicine Methodology I Laboratory Credit Hours: 1
This is the first in a series of two laboratories which allows the student to apply their knowledge of the material they learn in Methodology I and enhance the student's familiarity with the clinical setting.

NMT2723 Nuclear Medicine Methodology II Credit Hours: 3
This course enhances the student's knowledge attained from Methodology I by learning the remaining nuclear medicine procedures in order to properly execute all procedures successfully. The student will also demonstrate knowledge of any remaining PET imaging procedures not discussed in Methodology I.

NMT2723L Nuclear Medicine Methodology II Laboratory Credit Hours: 1
This is the second in a series of two laboratories which allows the student to apply their knowledge of the material they learn in Methodology II and enhance the student's familiarity within the clinical setting.
NMT2779 Introduction to Multiple Modalities  
**Credit Hours:** 3  
This course educates the student about proper recognition and interpretation of cross sectional anatomy. The student will also compare and analyze images from complementary modalities. It is crucial for the nuclear medicine technologist to understand three-dimensional imaging in order to enhance patient care and be an asset to the facility.

NMT2824 Nuclear Medicine Clinical Education III  
**Credit Hours:** 3  
Third in a four-course sequence of supervised clinical instruction in nuclear medicine technology. In addition to topics covered in Clinical Education II, the student is expected to perform routine quality control and imaging procedures. Students must successfully complete a required number of competencies as stated in the clinical syllabi for the respective semester.

NMT2834 Nuclear Medicine Clinical Education IV  
**Credit Hours:** 3  
Fourth in a four-course sequence of supervised clinical instruction in nuclear medicine technology. In addition to topics covered in Clinical Education III, the student is expected to perform routine quality control, imaging and therapy procedures. Students must successfully complete a required number of competencies as stated in the clinical syllabi for the respective semester.

NMT2960 Nuclear Medicine Advance Applications  
**Credit Hours:** 3  
This course allows the student to take a more in-depth perception upon previous taught Courses with emphasis upon clinical application and knowledge developed from prior clinical education classes.

NUR1020 Nursing Process I  
**Credit Hours:** 3  
This is a theoretical course for the beginning nursing student. Nursing Process I provide the student with the fundamentals of nursing, including such basic skills as health assessment, legal aspects of nursing practice, communication and documentation technique, asepsis, the nursing process, caring for patients having special procedures or specimen collection, and the role of the nurse as a member of the health care team. This course also includes explanation of specific physiological and psychological human needs as hygiene, safety, sleep and rest, sensory, grief and loss, self-concept and the nurse's role in assisting a person to meet these needs, while sensitive to cultural diversity, human dignity, and development progression.

NUR1020L Nursing Process I Clinical Laboratory  
**Credit Hours:** 2  
A clinical course for the beginning nursing student. Initially skills are learned in simulation Laboratory and then the student is introduced to direct patient care in an inpatient setting. The emphasis is on care of the adult experiencing medical/surgical situations. The focus is practical application and transference of the theoretical concepts covered in Nursing Process I.

NUR1210 Nursing Process II  
**Credit Hours:** 3  
The second in a series of theoretical Courses for the beginning nursing students. This course builds on previously learned concepts and introduces more sophisticated nursing interventions related to medication and blood administration, care of patients experiencing alterations in the basic needs of nutrition, elimination, comfort, fluid and electrolyte balance, acid-base balance, oxygenation, mobility, and asepsis, and care of the surgical patient, aging patient, and patient with knowledge deficits.

NUR1210L Nursing Process II Clinical Laboratory  
**Credit Hours:** 2  
The second in a series of clinical Courses building on previously learned concepts while incorporating more sophisticated nursing interventions related to medication administration, care of patients experiencing alterations in the basic needs of nutrition, elimination, comfort, fluid and electrolyte balance, oxygenation, mobility, asepsis, and care of the surgical patient. Course activities focus on nursing care of the adult patient experiencing medical/surgical situations.

NUR1220 Health Alterations I  
**Credit Hours:** 3  
Health Alterations I is a course designed to provide the student with knowledge of alterations of ingestion, digestion, metabolism, and elimination throughout the life cycle. The major focus is directed at meeting the health care needs of
the adult and pediatric patient through utilization of the nursing process. The student will be expected to integrate
principles of anatomy, physiology, and pathophysiology of the digestive and Genito urinary systems into the nursing
process. Components of pharmacology and nutrition will be included in this course. Consideration will also be given
to the psychosocial aspects of the wellness/illness continuum.

NUR1220L Health Alterations I Laboratory Credit Hours: 1
Health Alterations I Clinical Laboratory is a course designed to provide the student with the opportunity to utilize the
nursing process in the care of patients with alterations of ingestion, digestion, metabolism, and elimination throughout
the life cycle. The student will be expected to correlate theoretical knowledge and scientific principles with clinical
situations, observational experiences, written assignments and performance exams may be included in this course.

NUR1304L Transition Pediatric Nursing Clinic Laboratory Credit Hours: 1
This clinical course provides the LPN student with an understanding of growth and development through the stages
of childhood and the application of the nursing process through these stages.

NUR1310 Pediatric Nursing Credit Hours: 3
This pediatric course is designed to provide an understanding of growth and development through the stages of
childhood and the application of the nursing process to these stages.

NUR1310L Pediatric Nursing Laboratory Credit Hours: 2
This clinical course provides the student with an understanding of growth and development through the stages of
childhood and the application of the nursing process to these stages.

NUR1400L TR Healthcare of Women Clinical Laboratory Credit Hours: 1
This clinical course is for the LPN student and will enable students to apply the nursing process in providing nursing
care to the maternity patient, her family, and the fetus/newborn during antepartal, intrapartal and postpartal periods.
Consideration is given to the multiple factors which complicate the normal physiological or psychological process of
the childbearing period.

NUR1421 Health Care of Women Credit Hours: 3
Health Care of Women is a course designed to provide the student with the knowledge of the reproductive system and
health care needs of women throughout the life cycle. The major focus is directed to the childbearing portion of the
life cycle. The student is expected to utilize the nursing process in providing nursing care to the maternity patient, her
family, and the fetus/newborn during antepartal, intrapartal and postpartal periods. Consideration is given to the
multiple factors which complicate the normal physiological or psychological process of the childbearing period.

NUR1421L Health Care of Women Clinical Laboratory Credit Hours: 2
Health Care of Women is a clinical course designed to provide the student with the knowledge of the reproductive
system and health care needs of women throughout the life cycle. The major focus is directed to the childbearing
portion of the life cycle. The student is expected to utilize the nursing process in providing nursing care to the maternity
patient, her family, and the fetus/newborn during antepartal, intrapartal and postpartal periods. Consideration is given
to the multiple factors which complicate the normal physiological or psychological process of the childbearing period.

NUR1500L Transition Psychiatric Nursing Clinical Laboratory Credit Hours: 1
This clinical course provides the LPN student with a definition and understanding of the psychiatric patient. The
nursing process is utilized to present pathological condition. Therapeutic modalities are included.

NUR1520 Nursing Care of the Psychiatric Patient Credit Hours: 3
This course provides the student with a definition and understanding of psychiatric nursing. The nursing process is
utilized to present pathological conditions. Therapeutic interventions are included.

NUR1520L Nursing Care of the Psychiatric Patient CL Laboratory Credit Hours: 2
This clinical course provides the student with a definition and understanding of the psychiatric nursing. The nursing
process is utilized to present pathological conditions. Therapeutic modalities are included.
NUR2000 Transition Nursing I  
Credit Hours: 2  
Transition to Nursing Process I or NUR2000 is a 2 semester hours course which is a theoretical course designed to introduce the student to the basic elements of the Associate Degree Nursing curriculum. Nursing Transition I provide the licensed practical nurse with the fundamental skills and knowledge of the Registered Nurse role including nursing process, health assessment, legalities, basic communication skills, and an understanding of the needs of the medical surgical patient. This course builds on previously learned concepts and introduces more sophisticated nursing interventions related to medication and blood administration; care of patients experiencing alterations in the basic needs of fluid and electrolyte balance, acid-base balance, oxygenation, aging patient, and patient with knowledge deficits.

NUR2000L Transition Nursing I Clinical Laboratory  
Credit Hours: 2  
The student shall be responsible for providing care of a selected group of patients, being aware of legal and ethical issues pertinent to their care and effecting change as necessary. It will be essential for the student to examine his/her own values and methods of communication in attempting to problem-solve patient situations. Observational experiences, written assignments, and performance exams may be included in this course.

NUR2221 Health Alterations II  
Credit Hours: 3  
This course will continue to build on previously learned concepts related to the care of the medical surgical patient. The student focus and responsibility will be the practice-oriented, person-centered collaborative care of the medical surgical patients, with alterations in mobility, skin integrity, and/or neurological and sensory functioning. Prevention, rehabilitation, and evidence-based considerations, factors that contribute to or threatened health, honor diversity, ethical and informed decision making, and human dignity are emphasized.

NUR2221L Health Alterations II Clinical Laboratory  
Credit Hours: 2  
In this course the student will be responsible for applying the nursing process to assigned patients with alterations in mobility, skin integrity and neurological functions. This experience will require both clinical and written assignments. Evaluation will be based on their application of the nursing process to assigned patients.

NUR2222 Health Alterations III  
Credit Hours: 3  
This course is designed to provide the student with the knowledge necessary to implement the nursing process on patients with cardiopulmonary dysfunction throughout the life cycle. The focus is the pathophysiology, common medical, diagnostic and treatment modes, nursing assessments and interventions necessary to treat those patients. The students will be responsible for reviewing anatomy and physiology, pharmacology, pediatric and psychiatric principles as they apply to this course.

NUR2222L Health Alterations III Clinical Laboratory  
Credit Hours: 2  
In this course the student will be responsible for applying the nursing process to assigned patients with alterations in cardiopulmonary functioning. This experience will require both clinical and written assignments. Evaluation will be based on the application of the nursing process to assigned patients.

NUR2801 Transition Nursing IV  
Credit Hours: 3  
This theoretical is designed for the advanced nursing student. This course will provide the knowledge necessary to function as an effective member of the healthcare team in the role of the graduate nurse at the Associate degree level. The focus is directed toward implementation of one's role as a nurse in ways that reflect integrity, responsibility, ethical, legal practices, and evolving identity as a nurse committed to evidence based best practices such as caring, advocacy, and safe quality care for a diverse group of patients within a family and community context including emergency.

NUR2801L Transition Nursing IV Clinical Laboratory  
Credit Hours: 2  
The clinical focus of this course highlights the role of the registered nurse at the Associate Degree level of functioning as an effective member of the health care team in acute health care team in acute health care settings; ethical, holistic, and professional responsibilities of the registered nurse in roles as coordinator and manager of care. Grounded in the core values of caring and ethical decision-making, the student demonstrates a commitment to participate in a person-
centered manner that includes diversity, continuous growth, and pursuit of excellence, advocacy, and integrity. The student uses evidence-based practice and a patient-centered approach to support optimal health outcomes: and with guidance the student assists in the conscientious, safe coordination of patient care.

NUR2811 Trends, Practices, and Roles  
This course is designed to provide the knowledge necessary to move from the role of a student to that of a graduate nurse. The focus is directed toward the legal, ethical and professional responsibilities of the nurse in managerial and coordinating roles.

NUR2811L Trends, Practices, & Roles Clinical Laboratory  
This course is designed to provide the student with the knowledge necessary to implement the nursing process on patients with cardiopulmonary dysfunctions throughout the life cycle. The focus is the pathophysiology, common medical, diagnostic and treatment modes, nursing assessments and interventions necessary to treat those patients. The students will be responsible for reviewing anatomy and physiology, pharmacology, pediatric and psychiatric principles as they apply to this course.

NUR3069 Advanced Health Assessment  
Advanced health assessment addresses the totality of the client including the spiritual aspects of health, disease/disability, and the individual client's perceptions of the health/illness spectrum. The determination of the health/illness status of the client within the context of the client's socio-cultural values is essential in providing the framework for planning, implementing, communicating, and evaluating the outcomes of care. This course provides the knowledge, skills, interviewing and interactive techniques needed to obtain and communicate a systematic, culturally-appropriate, comprehensive health history and physical examination.

NUR3069L Advanced Health Assessment Laboratory  
The Advanced Health Care Assessment addresses the totality of the client including the spiritual aspects of health, disease/disability, and the individual client's perceptions of the health/illness spectrum. The determination of the health/illness status of the client within the context of the client's socio-cultural values is essential in providing the framework for planning, implementing, communicating, and evaluating the outcomes of care. This laboratory course provides the knowledge, skills, interviewing and interactive techniques needed to obtain and communicate a systematic, culturally-appropriate, comprehensive health history and physical examination.

NUR3119 Nursing Concepts and Theories  
The profession of nursing is the culmination of concepts and theories. Concepts and theories are the body of knowledge used to support nursing practice. Nursing recognizes that socialization into a discipline is guided by theories' use of language, identification of concepts and definition of relationships, structured ideas and facilitation of disciplined inquiry, practice and communication, as well as predicting outcomes of nursing practice. The Nursing Concepts and Theories course will explore the major constructs, theories, and models that form the foundation of nursing. The course will also investigate the history and evolution of nursing leaders, evolving issues, concepts, and theories, and their application to nursing practice.

NUR3167 Nurse as a Scholar  
Present aspects of scholarship that support the values of the nursing profession committed to both social relevance and scientific advancement. The practice of nursing derives knowledge from a wide array of other fields and disciplines adapting and applying this knowledge as appropriate to professional practice. This course examines these interrelationships and allows the nurse to utilize scholarly evidence to design and implement nursing care that is high-quality and cost effective to address issues important to the profession of nursing to question assumptions, and to utilize clinical reasoning and judgment.

NUR3678 Nursing Care of Vulnerable Populations  
Caring for the vulnerable is imperative for the compassionate, caring, effective and competent nurse. This course focuses on health issues affecting at-risk and vulnerable populations and how nurses can advocate reducing disparities in health care systems and health care delivery. The course emphasizes the inter-relationships of socio-cultural and public health care systems. Barriers to the navigation and utilization of health care systems are explored as related to
the economical, legal, political and cultural aspects of health protection and health maintenance.

**NUR3805 Nursing, Roles, Dimensions, & Perspectives**  
Credit Hours: 3

The discipline of Nursing has been identified as having the potential for making a major impact on the transformation of health care delivery to a safer, quality, and more cost-effective system, thus improving healthcare outcomes across populations. This course facilitates the transition of the Registered Nurse with an Associate Degree in Nursing or
diploma to the role of the BSN graduate. It encompasses the history, evaluation, ethical imperatives, trends and issues impacting the nursing profession in evolving and global health delivery environments. It explores the responsibilities and values of the nursing profession, communication theories and techniques, teaching learning concepts, critical thinking and clinical reasoning and judgment.

**NUR4128 Pathophysiology/Pharmacology**
Credit Hours: 3
This course provides the student with the basic understanding of pathophysiology related to human illness and pharmacotherapy related to the application of drugs for the purpose of disease prevention and treatment, within a systems framework. Emphasis is placed on biological theories and principles that provide a basis for understanding pathophysiology as an alteration in the normal physiology functioning of subsystems from conception to end of life and the chemical agents that are capable of producing biologic responses within the body. The course uses critical thinking processes to analyze diverse client presentations of selected illness for symptomatology, pathophysiology, and health care implications.

**NUR4165 Nursing Research**
Credit Hours: 3
This course explores the research process and allows the student to apply research methods relevant to nursing and nursing practice. Emphasis is placed in the legal, ethical, socio-cultural, economic and political implications of research in nursing and health care. Evidence-based practice is emphasized in guiding nursing practice.

**NUR4195 End of Life**
Credit Hours: 3
This course is designed to recognize death as the last stage of human growth and development. With a focus on the physical, emotional, psychosocial, spiritual, and cultural considerations at the end-of-life, the student will explore ethical and legal issues to enhance their skills and knowledge when working with patients and families at the end-of-life. Departmental approval is required to enroll.

**NUR4284 Dynamics & Contemporary Issues in Aging**
Credit Hours: 3
The aging population will affect the skills and services the healthcare workforce must be equipped to provide and the settings in which the care is provided. This course will provide an in-depth understanding of the concepts in normal aging, issues related to the client in communities, and health care issues confronted by the elderly. The impact of the elderly on society, end-of-life issues, the application of current theories and evidence of elderly, and available and potential health care systems and services are explored.

**NUR4636 Community Health Nursing**
Credit Hours: 3
The community based nurse cares for clients from many diverse cultures and must be prepared to give quality, effective, and culturally competent health care in a variety of settings and specialties. This course focuses on the role of the nurse in the community and emphasizes concepts and theories related to community health nursing. Community nursing addresses cultural, social, and epidemiological factors relative to health and illness, health promotion and disease prevention across the lifespan and families of diverse populations.

**NUR4636L Community Health Nursing Practicum**
Credit Hours: 2
This course presents clinical concepts of community health nursing focusing on the community as client and the multiple determinants of health in community health settings. The learner will participate in selected community based clinical activities and various community agencies as an interdisciplinary provider, designer and manager in the process to provide competent care, promote health protection, provide assistance with health maintenance and health restoration to a diverse population within the community.

**NUR4667 Nursing Perspectives & Global Trends**
Credit Hours: 3
This course examines the knowledge and skills of baccalaureate nursing students' perspectives on global health trends. This information helps to facilitate the awareness and knowledge of increased globalization affecting health care and its delivery. The incorporation of ethical considerations and cultural sensitivity into nursing practice has become a greater need as a result of an increasingly diverse, multicultural, globally oriented world. Information covering the overall socio-political and economical health care environment changes occurring in the 21st century health care system is addressed.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>NUR4826</td>
<td>Ethical &amp; Legal Aspects of Nursing</td>
<td>3</td>
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<tr>
<td>NUR4827</td>
<td>Principles of Nursing Leadership &amp; Management</td>
<td>3</td>
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<tr>
<td>NUR4827</td>
<td>Principles of Nursing Leadership &amp; Management</td>
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<tr>
<td>NUR4870</td>
<td>Nursing Informatics</td>
<td>3</td>
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<tr>
<td>NUR4945</td>
<td>Nursing Capstone</td>
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<tr>
<td>NUR4945L</td>
<td>Nursing Capstone Practicum</td>
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<tr>
<td>OCE1001</td>
<td>Introductory Oceanography</td>
<td>3</td>
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<tr>
<td>OCE1001L</td>
<td>Oceanography Laboratory</td>
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<tr>
<td>OCE3008</td>
<td>Advanced Oceanography</td>
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</tbody>
</table>
OCE3064C Marine Conservation & Restoration Biology  
Marine and coastal habitats provide direct and indirect benefits to humans. Conservation and restoration of these habitats is of vital importance to human health and well-being. Emphasis on policy and restoration field techniques to conserve and restore these habitats will be highlighted. Unit 8 will be covered with one or more of the remaining units covered based on faculty expertise.

OPT1110 Physical & Geometric Optics  
This course provides a foundation of mathematical ophthalmic concepts involving light energy as it passes through air, plastic, glass and water with emphasis on how light is modified by prisms and curved lens surfaces. These principles relate to the effect these ophthalmic devices have in correcting refractive errors of human eye.

OPT1110L Physical & Geometric Optics Laboratory  
This course provides the opportunity for students to demonstrate, measure and explore the behavior of light energy as it passes through prisms and curved lens surfaces. Students will demonstrate the principles of ophthalmic devices and how they correct the errors of human vision.

OPT1150 Ophthalmic Lenses  
Characteristics of single vision, multifocal, and free form lens design for proper lens selection to meet the visual needs of patients. Emphasis is placed on accurate positioning of the optical centers and selected multifocal addition design. ANSI and F.D.A. standards; prescription ordering; verification procedures; and absorptive lenses are presented. Low vision devices and occupational specialty lenses will be discussed.

OPT1150L Ophthalmic Lenses Laboratory  
This course provides the opportunity for students to gain hands on experience in the accurate positioning of the optical centers and selected multifocal addition designs. ANSI and F.D.A. standards, prescription ordering and verification procedures will be applied to patient jobs. Emphasis will be placed on the use of the manual and automated Lensometer. Fitting of low vision devices and occupational specialty lenses will be discussed.

OPT1210 Anatomy & Physiology of the Eye  
This course provides a review of the structure and function of the systems of the human body, emphasizing the anatomy of the human eye. Visual recognition of common eye disorders and refractive disorders are discussed.

OPT1330 Orientation to Vision Care  
This course reviews the techniques needed in a clinical environment for the collection of patient case history, visual acuity, basic visual skills ocular motility and accommodation, color discrimination, depth perception and binocular fusion. Medical terminology and Health Core standards are reviewed.

OPT1450 Ophthalmic Dispensing  
This course reviews the theory and terminology of ophthalmic frame materials, multifocal lenses, including progressive power and occupational bifocals and high index lenses. The process of analyzing the patient's prescription and identifying the patient's specific visual needs for the proper frame and lens selection is highlighted.

OPT1450L Ophthalmic Dispensing Laboratory  
This course provides the opportunity for students to practice ophthalmic dispensing. Measurement and adjusting ophthalmic frame materials, multifocal lens, occupational bifocals, high index lenses and low vision devices will be emphasized. The process of analyzing the patient's prescription and identifying the patient's specific visual needs for the proper frame and lens selection is highlighted.

OPT2060 Ophthalmic Management Policy & Procedures  
This course provides a review of procedures and terminology in correspondence, legal and ethical principles, inter- and intra-professional relationships, and retail office management. The history of opticianry, optometry and ophthalmology is traced. Special emphasis is on a comprehensive review of the curriculum. The student will be required to present oral and written reports.
OPT2090 Orientation to Vision Care Clinic  Credit Hours: 2
This course provides an introduction to the Broward College Vision Care Clinic. Students will apply technical skills acquired in previous course work. Recording of clinical data, administrative procedures and techniques in patient handling under the close supervision of clinic instructors and 5th semester students.

OPT2375 Refractometry  Credit Hours: 3
This course reviews the theory and terminology used in determining the powers of corrective lenses in relation to a patient's refractive error. Emphasis will be placed on the phoropter, retinoscope, and automated refraction instruments. Problems associated with the change in refractive powers will also be discussed.

OPT2420 Eyewear Fabrication I  Credit Hours: 1
This course presents a review of the theory of ophthalmic surfacing and finishing procedures. Students acquire knowledge to arrange single vision and multifocal lenses, use lensometers and lens clocks, operate project-o-markers for lens layout, select or fabricate frame patterns, and utilize several systems for surfacing and edging lenses for ophthalmic frames.

OPT2420L Eyewear Fabrication I Laboratory  Credit Hours: 2
In this laboratory course students will gain practical experience in ophthalmic surfacing and finishing procedures. Students will fabricate single vision and multifocal lenses, use lensometers and lens clocks, operate project-o-markers for lens layout, select or fabricate frame patterns, and utilize several systems for surfacing and edging lenses for ophthalmic frames.

OPT2421 Eyewear Fabrication II  Credit Hours: 1
Advanced techniques in measurement, fabrication and verification of single vision and multifocal lenses. Theory of ophthalmic surfacing and finishing procedures from written specifications ensuring that current ANSI and FDA standards are exceeded.

OPT2421L Eyewear Fabrication II Laboratory  Credit Hours: 2
Laboratory for OPT2421. Students will fabricate eyewear for the patients of the Vision Care Clinic using advanced techniques in measurement, fabrication and verification of single vision and multifocal lenses. Advanced techniques in the operation and maintenance of manual and computerized equipment.

OPT2460 Ophthalmic Dispensing Clinic I  Credit Hours: 2
Development of skills in the fitting and dispensing of ophthalmic lenses. Students will work under the close supervision of clinical staff in dispensing glasses to patients of the Vision Care Clinic. Emphasis will be placed on techniques used to dispense new technology in ophthalmic frame materials; multifocal lenses including progressive power and occupational bifocals; and high index lenses. The process of analyzing the patient's prescription and identifying the patient's specific visual needs for proper frame and lens selection is highlighted.

OPT2461 Ophthalmic Dispensing Clinic II  Credit Hours: 2
This is a continuation of OPT2460. It involves advanced skills in the fitting and dispensing of ophthalmic lenses. Students will work under the supervision of clinical staff in dispensing glasses to patients of the Vision Care Clinic. Students will practice advanced techniques used to dispense new technology in ophthalmic frame materials, multifocal lenses including progressive power and occupational bifocals, high index lenses, and low vision devices.

OPT2500 Contact Lens Theory  Credit Hours: 2
This course provides a review of the theory and terminology of contact lenses including fitting, application and removal procedures, care of soft and hard lenses, verification of contact lens prescription and "in-office" modification of contact lenses.

OPT2500L Contact Lens Theory Laboratory  Credit Hours: 2
This course provides a review of the practical procedures used to apply technical skills of contact fitting, application and removal procedures, care of soft and hard lenses, verification of contact lens prescription and "in-office"
modification of contact lenses.
OPT2800L Vision Care Clinic I
Credit Hours: 2
This course provides a review of the practical procedures used to apply technical skills of contact fitting, application and removal procedures, care of soft and hard lenses, verification of contact lens prescription and "in-office" modification of contact lenses.

OPT2830L Contact Lens Clinic I
Credit Hours: 2
Assist eye care specialists in the fitting and follow-up care of rigid and soft contact lenses for patients referred from the Vision Care Clinic. Familiarization with over-refraction, instructions for lens handling, cleaning, care and storage, and basic contact lens pathology.

OPT2831L Contact Lens Clinic II
Credit Hours: 2
This course involves the use of contact lens instruments to confirm all parameters for replacement lenses. Particular attention is given to the patient who is having problems with contact lenses after long-term wear due to corneal changes and sensitivity to solutions. Advanced over-refraction and contact lens fitting procedures are practiced.

OPT2875 Ophthalmic Dispensing Practicum I
Credit Hours: 2
In this laboratory course students will fabricate eyewear for the patients of the Vision Care Clinic using advanced techniques in measurement, fabrication and verification of single vision and multifocal lenses. Advanced techniques in the operation and maintenance of manual and computerized equipment.

OPT2876 Ophthalmic Dispensing Practicum II
Credit Hours: 2
This is an externship in an approved retail ophthalmic dispensing establishment involving frame styling, ordering of appropriately designed lenses, adjustment, repair and dispensing of eyewear. The student will gain a working knowledge of administrative management procedures of the practice.

OPT2879 Refractometry Lab
Credit Hours: 2
Practicum for OPT2375. Practical procedures used in determining the powers of corrective lenses in relation to a patient's refractive error. The student will learn to use the Phoropter, retinoscope, and automated refraction instruments in determining the patient's subjective and objective refraction. Problems associated with the change in refractive powers will be demonstrated.

ORH2527 Florida Flora & Ecosystems Landscapes
Credit Hours: 3
This is an introductory environmental science course designed to teach students plant ID and environmental aspects of Florida's diverse ecosystems.

ORH4256 Nutritional Monitoring & Management
Credit Hours: 3
This course is designed to teach students the techniques for determining, interpreting, and managing the nutritional status of landscape and container grown greenhouse and nursery crops. Upon successful completion of this course, students will be able to determine, interpret, and adjust: Water quality; Substrate physical parameters; Substrate chemical parameters; Irrigation practices; Fertilization practices.

OST1100C Keyboarding & Document Processing I
Credit Hours: 3
This course offers an introduction to the keyboard with development of fundamental techniques, skill development, and business correspondence and document processing.

OST1103C Basic Keyboarding
Credit Hours: 1
This course offers an introduction to the keyboard with development of fundamental techniques.

OST1257C Medical Terminology for the Administrative
Credit Hours: 3
This course is designed to provide the student with an extensive study of medical terminology used in the various areas of the healthcare industry. Emphasis is placed on the building of medical terms from word parts.
OST1330 Business English  
This course provides a refresher course in punctuation and capitalization.

OST1355C Records Management  
Students will act as records managers in a simulated office utilizing computerized and paper management of records from planning, creation, filing, and retrieving to disposal according to ARMA principles. The student will learn and work with the basic legal requirements (such as Privacy Act and Freedom of Information Act) for the release and safekeeping of information and the laws and regulations regarding the management of such records.

OST2053 Successful Job Search  
This course presents a hands-on, interactive study of interview and employability skills and focuses on the keys to career success.

OST2335 Communications in the Workforce  
This course is designed to help students communicate more effectively. Students will practice analyzing, planning, managing, and executing both written and oral presentations. Special focus includes grammar and all types of business documents to ensure appropriate content and structure.

OST2455C Medical Billing and Coding I  
This course provides advanced skills needed to work in a variety of medical billing and coding positions in the medical field. In-depth study of the various areas of medical billing/coding, workers' compensation, reimbursement, and appeal are presented.

OST2456C Medical Billing & Coding II  
This course provides extended knowledge and skills needed to work in a variety of medical billing and coding positions in the medical field. Topics include medical coding, medical claims, medical billing, accounts receivable, and medical management software.

OST2464C Medical Office Computer Application  
This course prepares a medical office assistant to work in a health care practice utilizing computerized medical office management software. It provides training for input of new patient entry, posting procedures and payments, insurance billing, appointment scheduling, file maintenance with support files, and generating the daily, end-of-month, and end-of-period reports which are performed in a medical office.

OST2501 Office Management  
This course is a study of the skills needed by the office professional in the workforce. It includes technology, diversity, teamwork, and the changing skills demanded in the workforce. The efficient handling of office matters, such as scheduling appointments, customer/client relations, managing office operations, processing mail and correspondence, communication, e-mail etiquette and effectiveness, coordinating meetings/travel, planning and managing an event budget.

OST2764C Advanced Word  
This course will provide specialized training on advanced word processing concepts and techniques. The major emphasis of this course will be the formatting of characters, paragraphs and documents, managing text flow, graphics, advanced table features, reference tools, mail merge and macros, and customizing Word. The skills developed by students completing this course will help prepare them for the Microsoft Certified Application Specialist (MCAS) exam.

OST2852C Database Management for the Office  
Course prepares students to solve business problems by moving beyond the basic skills to think critically about realistic business situations using database management.
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<th>Course Code</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>OST2949</td>
<td>Co-Op Work Experience</td>
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<tr>
<td>PAD2002</td>
<td>Introduction to Public Administration</td>
<td>3</td>
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<tr>
<td>PCB3023</td>
<td>Molecular &amp; Cellular Biology</td>
<td>3</td>
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<tr>
<td>PCB3063</td>
<td>Genetics</td>
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<tr>
<td>PCB3063L</td>
<td>Genetics Laboratory</td>
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<tr>
<td>PCB3401C</td>
<td>Wildlife Ecology &amp; Management</td>
<td>3</td>
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<tr>
<td>PCB4043</td>
<td>Introduction to Ecology</td>
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<tr>
<td>PCB4303</td>
<td>Freshwater Ecosystems</td>
<td>3</td>
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<tr>
<td>PCB4341C</td>
<td>Advanced Biological Field Techniques</td>
<td>3</td>
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<tr>
<td>PCB4454C</td>
<td>Biostatistics with Laboratory</td>
<td>4</td>
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<tr>
<td>PEL1041C</td>
<td>Recreation Activities</td>
<td>2</td>
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</table>

A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of learning objectives and employer evaluations.

This introductory course examines the governmental context of public administration including political values, bureaucratic politics, leadership and inter-governmental relations; organizational theory including decision making and organizational structure; and the administrative process including public personnel administration, budgeting, policy making and governmental regulation. The objective of this course is to provide the student with an overview of public administration with an emphasis on the political context.

A study of cell structure and function with emphasis on the properties of intracellular organelles and their molecular constituents. Includes photosynthesis.

Fundamental properties of inheritance in eukaryotic organisms emphasizing examples in man. Basic concepts are developed for the nature, organization, transmission, expression, recombination, and function of genetic materials, and principles are derived for genetically characterizing populations.

This course is designed to consider wildlife as a natural resource with an emphasis on principles of ecology, conservation and management. Time will be taken in this course to discuss wildlife management issues and opportunities in Florida habitats. The course is intended for students with interests in biology, environmental studies, and/or interdisciplinary natural sciences. Permission of instructor.

This course is an introduction to ecological principles covering physiological, behavioral, population, community, ecosystem, landscape and global ecology. This course examines the integrated working of nature at all levels, from atoms and molecules to global cycles that sustain life on earth. The ecology of individuals is examined, in the realm of physiological ecology and in the adaptations of organisms to the abiotic factors of the environment.

An interdisciplinary approach to examination of inland waters including lakes, streams, marshes and swamps. Emphasis on the biotic, chemical and geological components of these aquatic ecosystems.

Concentrates on techniques used in Biological field work. Units 1-3 will be covered with one or more of remaining units covered based on faculty expertise.

Biostatistics instructs students in statistical procedures for analysis of biological data. Students will organize and summarize biological data, develop, and test appropriate hypotheses, explain and apply common statistical tests, and use statistical software to analyze data.

An overview of outdoor and indoor games and activities for various age groups in a recreational setting.
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<tbody>
<tr>
<td>PEM1116C</td>
<td>Functional Wellness</td>
<td>2</td>
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<td></td>
<td>Functional Wellness emphasizes the importance of knowledge, attitudes, and practices relating to personal wellness. It is a course designed to expose students to a broad range of issues and information relating to the various aspects of personal wellness including physical, social, emotional, intellectual, spiritual and environmental wellness. This course integrates personal wellness and fitness in both a classroom and exercise environment, and may include Pilates, yoga, functional training, spinning and basic training. Evolving current topics such as nutrition, disease prevention, stress reduction, exercise prescription, and environmental responsibility are integrated to enable the student to understand the lifelong effects of healthy lifestyle choices. This is an International/Intercultural competency course.</td>
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<tr>
<td>PEM1121C</td>
<td>Beginning Yoga Exercises</td>
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<td></td>
<td>Students will learn proper exercise, relaxation and balance of both the body and mind. A holistic approach to health and stress management is emphasized. Coeducational.</td>
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<tr>
<td>PEM1131C</td>
<td>Weight Training</td>
<td>2</td>
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<td>A course primarily designed and organized for students of all ages to optimize their wellness in each of the following six interrelated dimensions: physical wellness; intellectual wellness; emotional wellness; spiritual wellness; interpersonal/social wellness; environmental/planetary wellness. Students will learn how to assess and apply this information to their lives in order to contribute to the welfare of the community and environment with a specific emphasis on resistance training methods and techniques. This is an International/Intercultural competency course.</td>
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<tr>
<td>PEM1141C</td>
<td>Aerobic Wellness</td>
<td>2</td>
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<td></td>
<td>Aerobic Wellness emphasizes the importance of knowledge, attitudes, and practices relating to personal wellness. It is a course designed to expose students to a broad range of issues and information relating to the various aspects of personal wellness including physical, social, emotional, intellectual, spiritual and environmental wellness. This course integrates personal wellness and fitness in both a classroom and exercise environment. Students will incorporate and apply concepts of aerobic exercise and healthy living in ways that will contribute to the welfare of the community and the environment. This is an International/Intercultural competency course.</td>
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<tr>
<td>PEN1121</td>
<td>Beginning Swimming</td>
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<td></td>
<td>Coeducational.</td>
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<tr>
<td>PEN1171</td>
<td>Aquatic Wellness</td>
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<td></td>
<td>Aquatic Wellness emphasizes the importance of knowledge, attitudes, and practices relating to personal wellness. It is a course designed to expose students to a broad range of issues and information relating to the various aspects of personal wellness including physical, social, emotional, intellectual, spiritual and environmental wellness. This course integrates personal wellness and fitness in both a classroom and exercise environment. Students will incorporate and apply concepts of aquatic exercise and healthy living in ways that will contribute to the welfare of the community and the environment. This is an International/Intercultural competency course.</td>
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<tr>
<td>PEN1231</td>
<td>Beginning Basic Sailing</td>
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<td>The basic course includes certain fundamentals and techniques of Seamanship and Sail handling as would be necessary for the safe, enjoyable use of a sailboat. Coeducational.</td>
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<tr>
<td>PEN1241</td>
<td>Windsurfing</td>
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<td>This basic course includes the fundamentals and techniques of handling a Windsurfing Board that are necessary for safe and enjoyable use in this activity. Coeducational.</td>
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<tr>
<td>PEN2122</td>
<td>Intermediate Swimming</td>
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<td></td>
<td>Coeducational.</td>
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</table>
PEN2136 Scuba Diving  
**Credit Hours: 1**  
This course offers competencies for the PADI basic SCUBA course. Students will learn fundamental skills of snorkeling and scuba diving, as well as theories and knowledge for safe diving. This course does include open water dives required for National Certification. Student must furnish their own mask, snorkel, scuba fins and PADI Open Water Crew Pack (wet suit is optional). The course will meet at Tigertail Lake.

PET1303 Foundations of Exercise Science  
**Credit Hours: 3**  
This course is designed to provide a foundational knowledge base which is common to all the different areas of fitness leadership. The didactic instruction lays the groundwork required by the fitness professionals in order to be analytical in their approach to safe and effective exercise programming for the public. Course content is heavy in the areas of anatomy and physiology as well as kinesiology, the science of human movement.

PET2622C Care/Prevention/Athletic Injuries  
**Credit Hours: 2**  
Develops competence, knowledge and skill in the prevention and care of athletic injuries. Understands physical conditioning, nutrition and types of exercises. This course does not lead to certification of athletic training. It does not lead to any license nor does it lead to preparation of certification. This is a basic course in prevention of injuries.

PGY1801C Photoshop Design  
**Credit Hours: 3**  
This is a graphic design course formulated to develop skills in digital imaging. Students will learn through the use of the computer how to create, edit and manipulate digital images from scanned photographs and artwork. Students will utilize retouching technique to modify, enhance and reshape images, apply special effects, adjust color balance, manage files, and prepare their work for print output and web/electronic presentation. The class is portfolio driven, training students to follow a business process for analyzing client needs, conducting research and developing a concept for production within a budget.

PGY1802C Digital Photography  
**Credit Hours: 3**  
This is a Graphic Design course formulated to develop skills with a digital camera. Students will learn through the use of a digital camera how to take photographs for use in the designs they create for print, web and multimedia. Students will learn to properly expose, compose, and use effective lighting in the making of photographs. The use of natural and artificial lighting will be used in portraiture, product and outdoor photography.

PGY2401C Photography I  
**Credit Hours: 3**  
Basic procedures of black and white still camera work, developing, and printing. There will be an emphasis on intensifying visual perception and analysis of photographs as an Art form. (Students will supply 35mm camera, film, and paper).

PGY2404C Photography II  
**Credit Hours: 3**  
This course is designed for the exploration of more advanced printing and shooting techniques. The students will be required to understand and apply techniques in medium format cameras, large focus cameras and studio lighting in order to achieve a cohesive body of work. (The use of 35mm is also included).

PGY2800C Fine Arts Digital Photography  
**Credit Hours: 3**  
This course has been designed for Visual Arts students, it will provide them with the necessary tools to understand the conceptual, visual, historical, and cognitive arguments needed to create a cohesive and personal body of work. The students will learn Fine Arts Digital Photography through the use of digital cameras, film scanners and photo editing software. It will be hands-on learning experience. Critiques will be the forum where students present their ideas and discuss/verbalize concepts dealing with content and form. Critiques are mandatory and will be a group experience.

PGY2905 Independent Study: Photography  
**Credit Hours: 3**  
A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem. During this course students will be asked to produce a cohesive body of work, technically and conceptually resolved.
**PHI1100 Introductory Logic**  
Credit Hours: 3  
Study of the principles and evaluation of critical thinking including identification and analysis of fallacious, as well as valid reasoning. Traditional and symbolic logic will be considered and foundations will be laid for further study in each area. This is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**PHI2010 Introduction to Philosophy**  
Credit Hours: 3  
This course is an introduction to the nature of philosophy, philosophical thinking, major intellectual movements in the history of philosophy, and specific problems in philosophy. The relationship between philosophy, society, religion, and culture will be examined. This is a writing credit course with International/Intercultural content course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**PHI2600 Introduction to Ethics**  
Credit Hours: 3  
This course is an introduction to the nature of ethics, ethical theories, and specific ethical issues. Introduction to Ethics is a writing course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**PHI2930 Special Topics: Philosophy**  
Credit Hours: 3  
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Topics will be identified by the PHI2930 course title published in the course schedules for each term that the course is offered. Special Topics credit hours are not automatically transferable.

**PHT1020 Therapeutic Communication for the PT Assistant**  
Credit Hours: 2  
An overview of effective communication skills and concepts regarding successful therapeutic interactions will be presented. Students will participate in several interactive sessions to become familiar with team building, verbal and non-verbal communication requirements, effective listening concepts, and conflict management to determine how to manage clinical situations as they arise. Cultural diversity is discussed. Students are responsible for developing an in-service presentation as a means of enhancing effectiveness of communication.

**PHT1103 Anatomy for the PT Assistant**  
Credit Hours: 2  
Course introduces basic human anatomy with an emphasis on the structure and function of the skeletal and muscular systems. Actions, origins, insertions and innervations of muscles are discussed. Surface anatomy is presented with an introduction to basic palpation.

**PHT1103L Anatomy for Physical Therapist Assisting Laboratory**  
Credit Hours: 1  
Laboratory sessions for Anatomy for PTA (PHT1103) are designed to provide the students with an opportunity to identify, with accuracy, a variety of bones, bony landmarks, muscles, ligaments and other soft tissue structures using graphics and various anatomical specimens/models. Basic palpation skills are developed. Practical examinations are completed.

**PHT1200 Introduction to Physical Therapy**  
Credit Hours: 3  
Course introduces the student to the historical background, philosophy and goals of physical therapy as a profession. It incorporates discussion on legal and ethical issues, educational requirements, supervisory relationships and current developments related to physical therapy. Health care delivery systems, the medical record and issues of reimbursement are discussed. Presents the basic theory of preparing the patient and the treatment area, positioning and transferring techniques, gait training, and wheelchair prescription. Professional behaviors are introduced.

**PHT1200L Introduction to Physical Therapy Laboratory**  
Credit Hours: 1  
Laboratory sessions for Introduction to Physical Therapy (PHT1200) are designed to allow the students an opportunity to familiarize themselves with the basic fundamentals of patient care. Emphasis is on body mechanics analysis, positioning procedures, transfer training, gait training, basic patient preparation skills, and other common physical therapy interventions. Case studies of various medical conditions with emphasis in these areas are completed. Data collection relative to the course content as well as patient and caregiver education are emphasized. Practical examinations are completed.
PHT1211 Disabilities & Therapeutic Procedures I  
Credit Hours: 3
Course introduces the student to the theories and practical applications of physical therapy modalities. The physiologic effects, indications/contraindications, and intervention parameters of patient care interventions such as heat, cold, ultrasound, electrotherapy, traction, compression, hydrotherapy, and massage are presented. Principles of effective documentation and data collection are discussed. Case study analysis requires the student to apply clinical decision-making supported by rationales to determine appropriate modality interventions.

PHT1211L Disabilities & Therapeutic Procedures I Laboratory  
Credit Hours: 2
Laboratory sessions for Disabilities & Therapeutic procedures (PHT1211) are designed to develop student skills in the actual performance of the patient care interventions presented. Skills in massage are developed. Practical application of each intervention is emphasized with patient simulations and case studies enhancing the ability to understand a plan of care for a patient. Professional behaviors, at the intermediate level, are assessed. Data collection relative to the course content as well as patient and caregiver education are emphasized. Skill checks as well as competency evaluations are completed. Students are expected to demonstrate competency in carrying out an appropriate therapeutic modality plan of care, including effective documentation.

PHT1300 Survey of Pathological Deficits  
Credit Hours: 3
Course introduces the student to general pathological conditions with emphasis on those commonly seen in the field of physical therapy. Basic system anatomy is reviewed with an emphasis on the pathophysiology of disease. Descriptions of how diseases are classified and the natural course/prognosis of these diseases are presented. Implications of disease processes, etiology, signs and symptoms, diagnostic testing, contraindications/precautions and treatment are discussed for each pathology presented in the course. When relevant, specific physical therapy plans are discussed. The effects of disease across the lifespan and in general are considered.

PHT1310 Survey of Musculoskeletal Deficits  
Credit Hours: 2
Course introduces the student to general pathological conditions with emphasis on those commonly seen in the field of physical therapy as they relate to the musculoskeletal systems. Descriptions of how musculoskeletal diseases are classified, diagnosed and treated, as well as the natural course/prognosis of these diseases are presented. Implications of disease processes, etiology, signs and symptoms, diagnostic testing, contraindications/precautions and treatment are discussed for each pathology presented in the course. The effects of aging upon disease and in general are considered.

PHT1350 Basic Pharmacology for PT Assistants  
Credit Hours: 1
Course introduces concepts of basic pharmacology and presents pharmacological agents dispensed for conditions commonly seen in physical therapy. Drug responses and interactions as they relate to patient response are discussed.

PHT1801L Clinical Practice I  
Credit Hours: 2
Course involves student assignment to a local clinical facility. Includes scheduled class meetings to discuss clinical performance objectives, the self-appraisal process, and overall requirements for this novice-level practicum. Discussions also include professionalism, attitudes, patient rapport, sexual harassment, etc. A journal report of clinical experiences and an article review are required. Weekly online discussion forums facilitate critical thinking, peer review, and managing clinical situations at the novice-level. Students attend a personal conference with the academic coordinator of clinical education to discuss progress and to identify areas of strength/weakness with appropriate target dates methods of amelioration, if needed. Students receive a satisfactory/fail grade.

PHT2120 Applied Kinesiology  
Credit Hours: 3
This course is designed as part of a continuum in the application of anatomy to facilitate student analysis of functional movements with specific focus on the relationship between joint structure and function. Principles of biomechanics as it relates to human movement will be reviewed. Normal and pathological gait patterns are presented as well as normal and pathological movement patterns of the head, spine, pelvis, UE, and LE. Special tests which help identify specific deficits will be discussed. Case studies of various functional impairments with an emphasis on functional task analysis as well as therapeutic interventional approaches which help restore function are presented. Orthotic
interventions for the spine and extremities are discussed with an emphasis on correcting pathological biomechanics.
PHT2120L Applied Kinesiology Laboratory  Credit Hours: 1
Laboratory sessions for Applied Kinesiology (PHT2120) are designed to provide opportunities for the students to practice the skills of analyzing normal and pathological gait, along with normal and abnormal movements of the head, spine, pelvis, UE and LE. Performance of special tests will be practiced. Palpation of surface anatomy and review of anatomical/bony landmarks occurs. Through completion of Laboratory activities and case studies, the student correlates patient problems to various pathologies with their deficits in functional activities and gait. Therapeutic interventional approaches which include progression will be developed to address functional deficits. Orthotic interventions for the spine and extremities are applied with an emphasis on correcting pathological biomechanics.

PHT2162 Survey of Neurological Deficits  Credit Hours: 3
Course introduces the etiology, pathophysiology and symptoms of common neurological diseases/conditions. Neurodiagnostic procedures are presented. Course introduces the etiology, pathophysiology and clinical manifestations of common neurological diseases/conditions including but not limited to cerebrovascular accidents, traumatic brain injuries, and spinal cord injuries. Basic neuroanatomy of the central and peripheral nervous systems is reviewed. Reflex integration as well as normal growth and development are discussed. Online case studies in the form of Grand Rounds assignments of various neurological conditions are completed.

PHT2224 Disabilities & Therapeutic Procedures II  Credit Hours: 4
Course introduces concepts of therapeutic exercise with regards to its principles, and objectives. The theory of and application of specific exercise regimes are presented. Principles of ROM, strengthening, and stretching techniques are presented. A basic introduction to goniometry and manual muscle training is presented as it pertains to the development of therapeutic exercise interventions. Professional behaviors, at the intermediate level, are assessed.

PHT2224L Disabilities & Therapeutic Procedures II Laboratory  Credit Hours: 2
Laboratory sessions for Disabilities and Therapeutic Procedures II (PHT2224) are designed to provide the student with observation and actual application of therapeutic exercise in the laboratory setting. ROM, strengthening, and stretching techniques are practiced. Goniometry and manual muscle testing procedures are practiced as they relate to the provision of therapeutic exercise. Data collection relative to the course content as well as patient and caregiver education are emphasized. Practical examinations are completed. Students are expected to demonstrate competency in developing and carrying out an appropriate therapeutic exercise program including effective documentation.

PHT2704 Rehabilitation Procedures  Credit Hours: 3
Advanced course designed to develop skill in and understanding of the underlying principles of advanced physical therapy plans of care including motor learning principles. Techniques presented include advanced therapeutic exercise programs (stroke, spinal cord injured, etc.) proprioceptive neuromuscular facilitation (PNF), Bobath and Brunnstrom. Amputations and principles of prosthetics are detailed with fitting and check-out procedures reviewed.

PHT2704L Rehabilitative Procedures Laboratory  Credit Hours: 1
Laboratory sessions for Rehabilitative Procedures are designed for the students to practice the utilization of developmental postures in patient interventions as well as PNF, facilitation/inhibition techniques and other forms of advanced therapeutic exercise approaches. Stump wrapping and therapeutic management of prosthetic patients are practiced. Case studies of various medical conditions with emphasis on advanced therapeutic exercise approaches as well as application of prosthetic principles are completed. Data collection relative to the course content as well as patient and caregiver education are emphasized. Skill checks are completed. Students are expected to demonstrate competency in developing and carrying out appropriate interventions for a patient with neurological deficits. Professional behaviors, at the entry level, are assessed.

PHT2810L Clinical Practice II  Credit Hours: 5
Course involves student assignment to local clinical facility. Includes scheduled class meetings to review clinical performance objectives, the self-appraisal process, and overall requirements for this intermediate level practicum. Class discussions are held to share and discuss experiences, patient care problems, learning styles, cooperative group participation, acceptance and implementation of constructive criticism, etc. A clinical journal and an in-service are
required. Weekly online discussion forums facilitate critical thinking, peer review, and managing clinical situations at the intermediate level. Students attend a personal conference with the academic coordinator of clinical education to discuss progress and to identify areas of strength/weakness with appropriate target dates and methods of amelioration, if needed.

PHT2820L Clinical Practice III  Credit Hours: 5
Course involves full time student assignment to a local clinical facility. Includes scheduled class meetings to discuss clinical performance objectives, the self-appraisal process, and overall requirements for this entry-level practicum. A clinical journal, a case study report and a research project are required. Class discussions are held to share and discuss experiences, patient care problems, readiness for the workplace, leadership responsibilities, professional growth, etc. Weekly online discussion forums facilitate critical thinking, peer review, and managing clinical situations at entry level. Students attend a personal conference with the academic coordinator of clinical education to discuss progress and to identify area of strength/weaknesses with appropriate target dates and methods of amelioration where necessary.

PHT2931 Transition Seminar  Credit Hours: 2
A project-based seminar course that utilizes discussion and presentation to address content such as legal and ethical issues, interpersonal skill refinement, employment techniques, quality assurance, and career development. Discharge planning concepts are reviewed. Empathy for patients and enhanced understanding of the PT Assistant's responsibility to the community are explored through a community advocacy project. A capstone project is completed to assess entry-level preparation. The course also provides a comprehensive curriculum review and presents details on applying for licensure as students prepare for the transition to the work place. Professional behaviors, at entry-level, are assessed.

PHY1001 Applied Physics  Credit Hours: 3
An introductory course in general physics outlining topics in mechanics, matter, magnetism, electricity, heat and wave phenomena. The course is intended for students in technical or vocational fields. The student will learn to analyze and solve problems using analysis in algebra and written composition projects.

PHY1001L Applied Physics Laboratory  Credit Hours: 1
A laboratory which allows students to able to collect and analyze data in a variety of experiments covering topics covered in its companion course PHY1001L. Students will create experiment reports using analysis in algebra.

PHY2048 General Physics with Calculus I  Credit Hours: 4
PHY2048 is part one of a comprehensive course in physics outlining mechanics, heat, and wave motion using analysis in calculus.

PHY2048L General Physics with Calculus I Laboratory  Credit Hours: 1
PHY2048L is a laboratory which allows students to able to collect and analyze data in a variety of experiments covering topics covered in its companion course PHY2048. Students will create experiment reports using analysis in calculus.

PHY2049 General Physics with Calculus II  Credit Hours: 4
PHY2049 is part two of a comprehensive physics course outlining electricity, magnetism and optics using analysis in calculus.

PHY2049L General Physics with Calculus II Laboratory  Credit Hours: 1
A series of physics laboratory experiments chosen to coincide with the lecture course PHY2049. The course will include topics in electricity, magnetism, and optics. One 2-hour class meeting per week. A laboratory fee is charged.

PHY2053 General Physics I  Credit Hours: 3
PHY2053 is the first course in a two-semester sequence outlining mechanics, properties of matter, heat and sound. Algebra, trigonometry, geometry and vector methods will be used in the quantitative description of these topics.
PHY2053L General Physics I Laboratory Credit Hours: 1
PHY 2053L is a laboratory which allows students to able to collect and analyze data in a variety of experiments covering topics covered in its companion course PHY2053. Students will create experiment reports using analysis in algebra.

PHY2054 General Physics II Credit Hours: 3
PHY 2054 is the second course in a two-semester sequence, PHY2053 and PHY2054. The topics covered in PHY2054 include: electricity, magnetism and optics. Algebra, trigonometry, geometry and vector methods will be used in the quantitative description of these topics.

PHY2054L General Physics II Laboratory Credit Hours: 1
Laboratory experiences designed to accompany the topics under study in PHY2054.

PLA1003 Introduction to Paralegal Studies Credit Hours: 3
This course provides an overview of the training and duties of the paralegal. Also included is a discussion of legal terminology, research techniques, and pertinent litigation documents.

PLA1104 Law Library/Research Credit Hours: 3
This course provides information on how to research using both traditional and computer-assisted methodologies. An in-depth examination of the law library and legal research techniques are emphasized.

PLA1201 Civil Litigation Credit Hours: 3
This course covers the basic concepts of Civil Litigation. Discussions involve individual and entity liability in relation to the specific acts committed.

PLA1303 Criminal Litigation Credit Hours: 3
This course provides students with a survey of the criminal justice system. Substantive and procedural aspects of criminal law are studied. Course content includes the nature of different crimes, the potential charges, and penalties involved; also covered are pre-trial procedures, discovery, plea-bargaining process, and the problems involved in the conduct of trial proceedings.

PLA1435 Corporations Credit Hours: 3
This course provides an in-depth study of Corporate Law. Topics covered include types of corporations, articles of incorporation, bylaws, shareholders' agreements, voting rights, management structure, directors' powers, and voluntary/involuntary dissolutions. Non-profit corporations and professional associations are also discussed.

PLA1560 Probate Practice Credit Hours: 3
This course prepares legal assistants to work effectively under the supervision of a lawyer in the probate and administration of an estate. The Florida Probate Code, trusts and taxes are studied. Preparation of pleadings is included.

PLA1610 Procedures for Real Estate Title Closing Credit Hours: 3
This course surveys the basic concepts of Real Property Law. The students study how to handle a real estate transaction from the drafting of a contract to its closing. The nature of property, the consequences of its possession, and the mechanics of the title examination are also studied.

PLA1800 Domestic Relations Credit Hours: 3
This course surveys domestic relations, and includes topics such as marriage, dissolution of marriage, separation agreements, time-sharing, legitimacy, adoption, name changes, support, court procedures, and property disposition.
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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>PLA1841</td>
<td>Immigration Law</td>
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<td>This course provides an in-depth study of Immigration Law. Topics covered include a historical overview of immigration law, types of immigration law practices, agencies involved with immigration laws, the drafting of documents and forms associated with immigration law, the Immigration and Nationality Act and the administrative system covering the practice of immigration law.</td>
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<tr>
<td>PLA2114</td>
<td>Legal Writing &amp; Drafting</td>
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<td>This course concentrates on developing skills in the grammar, language, and format of legal documents. Documents drafted include legal correspondence, legal memoranda, deposition summaries, persuasive documents, and contracts.</td>
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<tr>
<td>PLA2466</td>
<td>Debtor/Creditor Relations</td>
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<td>This course provides an in-depth study of Debtor/Creditor law. Topics covered include collection of debts through court processes, post-judgment collection practices, bankruptcy law, landlord/tenant debt law, collection of debts based upon negotiable instruments, federal consumer collection acts, and foreclosure actions.</td>
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<tr>
<td>PLA2762C</td>
<td>Paralegal Office Systems</td>
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<td>This course covers a wide range of knowledge, skills, and tasks in order to enable the paralegal to function effectively in a legal office. Technology, management skills, and general office procedures and systems are covered, including but not limited to legal time-keeping and billing, document assembly, e-filing, client trust accounts, the cloud, social media and ethics.</td>
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<td>PLA2930</td>
<td>Selected Topics in Paralegal Studies</td>
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<td>This course will explore a selection of topics and trends of special interest in the legal field.</td>
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<tr>
<td>PLA2940</td>
<td>PLA Practicum</td>
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<td>This course is designed to apply the knowledge and skills developed in the required Courses through practical work experience. The student will perform legal work for 144 hours under the supervision of an attorney. In addition to the course pre-requisites identified, in order to register students must have successfully completed 5 additional PLA required Courses and receive approval from the Practicum Coordinator.</td>
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<tr>
<td>PLP3002C</td>
<td>Fundamentals of Plant Pathology</td>
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<td>Principles and practices of plant pathology.</td>
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<tr>
<td>POS2041</td>
<td>National Government</td>
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<td>This course provides a systematic introduction to the political system of the United States of America through the study of theory, principles, policy outcomes, and responsible institutions involved in the formation and operation of American National Government. The course will be organized along four broad fronts: (1) the political founding; (2) political parties and elections; (3) political institutions (e.g., president, Congress, etc.); and (4) policy (e.g., domestic and foreign). Students must earn a minimum grade of C to meet the requirements of the Gordon Rule. This is a writing credit course.</td>
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<tr>
<td>POS2112</td>
<td>State &amp; Local Government</td>
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<td>This course provides a systematic introduction to the principles and institutions of American state and local government, with some emphasis on Florida politics. It delves into the structure, functions, and decision-making processes of the 50 states and the more than 85,000 localities (governments) within those states. This is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.</td>
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<tr>
<td>POS2601</td>
<td>The American Constitution</td>
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<td>A study of the basic elements of the U.S. Constitution as they impact society and the individual. Emphasis is placed upon the document's theoretical, as well as, pragmatic applications. Course is taught from perspectives which are primarily historical and cultural.</td>
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<tr>
<td>POS2949</td>
<td>College Internship in Political Science</td>
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This course of study is designed to provide applied work experience within the political process, either through the private or public sectors. Evaluation of student performance will be based on pre-defined learning objectives and documented with specific information acquired from the student and employer. The student will be expected to complete 16 hours to the internship during the semester.
PSC1121 Physical Sciences Survey  Credit Hours: 3
PSC1121 is a survey course outlining topics in astronomy, chemistry, geology, meteorology and physics. The course is intended for the non-major student. The student will compose writing projects and analyze problems using analysis in algebra.

PSC1121L Physical Sciences Laboratory  Credit Hours: 1
PSC1121L is a laboratory which allows students to able to collect and analyze data in a variety of experiments covering topics covered in its companion course PSC1121L. Students will create experiment reports using analysis in algebra.

PSC2910 Directed Independent Research  Variable Credit Course (1-3 Credit Hours)
Students (individually or in a group) will conduct research projects or certain aspects of research projects under the supervision of the instructor. This course is intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and reporting in physical sciences.

PSC2914 Independent Research in the Physical Sciences  Variable Credit Course (1-3 Credit Hours)
Students (individually or in a group) will conduct research projects or certain aspects of research projects under the supervision of the instructor. This course is intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and reporting.

PSC4912 Independent Research in the Physical Sciences  Variable Credit Course (1-3 Credit Hours)
Students (individually or in a group) will conduct research projects or certain aspects of research projects under the supervision of the instructor. This course is intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and reporting.

PSC4930 Special Topics in Physical Science  Variable Credit Course (1-3 Credit Hours)
Course centers around topics of current interest or special interest to students or instructors. Topics or focus may vary from semester to semester.

PSC4948 Senior Internship  Credit Hours: 3
A course designed to provide training in a student’s field of student through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and intern host.

PSY2012 General Psychology  Credit Hours: 3
General Psychology reviews the scientific principles related to human behavior and mental processes. Topics include the scientific method, neuroscience, learning, memory, and thinking, emotions, motivation, and health, life span development, personality, psychological disorders, and therapies, and social psychology. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

PSY2012L General Psychology Laboratory  Credit Hours: 1
This laboratory course parallels and supplements the instruction given in General Psychology (PSY2012). Illustrated in this course are a variety of experimental and behavioral activities that demonstrate the scientific basis of psychology.

PSY2043 Advanced General Psychology  Credit Hours: 3
The rationale, methods, and application of the scientific analysis of behavior. Emphasis is placed on the lawfulness of behavior, how behavioral laws are found and used in the modification of behavior.

PSY2905 Independent Study in Psychology  Credit Hours: 3
Directed study course in the Behavioral Sciences. The course will be available to both majors and non-majors who wish to investigate a particular problem. The student will make application for the course to the Head of the Behavioral Science Department via an Instructor.
PSY2930 Special Topics: Psychology  Credit Hours: 3
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Topics will be identified by the PSY2930 title published in the course schedules for each term that the course is offered. Special Topics credit hours are not automatically transferable. Transfer credit is the prerogative of the receiving institution.

QMB1001 Business Mathematics  Credit Hours: 3
This course emphasizes the application of mathematics to selected business topics and problems. In addition, it includes material in linear equations and descriptive statistics.

QMB2100 Quantitative Methods in Business  Credit Hours: 3
This course applies quantitative methods to business problems with emphasis on learning to select the appropriate problem solving method, applying the chosen method, and interpreting the solution. The use of quantitative methods in managerial decision making is a continuous focus of this course. Management problems are used and written managerial recommendations are required.

QMB2302C Applied Business Analytics  Credit Hours: 3
This course provides a foundation for students to understand and apply the core principles and tools of a relational database. This combination of knowledge and skills will allow students to create tables, manage data within those tables, and create customized reports derived from data stored in relational databases.

RAT1001 Introduction to Radiation Therapy  Credit Hours: 3
This course will provide the students with an introduction to the radiation therapy program and the role and responsibilities of a student radiation therapist. This course will also define the different personnel required for a radiation therapy department to function, and define the structure and organization of hospitals. This course will also provide an introduction into cancer and cancer management with an overview of the psychological, sociological and economical aspects of cancer.

RAT1002 Introduction to Radiation Therapy Clinical  Credit Hours: 3
A course designed to provide knowledge and instruction in the application of radiation therapy procedures with a detailed study of instrumentation, radiation therapy equipment, patient charting and radiation procedures during the early phases of patient contact. This course will also cover radiation safety, treatment tolerance doses of critical structures, treatment procedures, basic patient positioning, operation of the equipment and patient accessories.

RAT1002L Introduction to Radiation Therapy Clinical  Credit Hours: 1
A course designed to provide knowledge and hands-on instruction in the application of radiation therapy procedures with a detailed study of instrumentation. This Laboratory corresponds to the information and objectives of RAT1002 Specific radiation therapy terminology, basic procedures, specific patient positioning and accessories will also be covered.

RAT1112 Radiation Therapy Medical Imaging  Credit Hours: 1
An introductory study to radiographic processes. Included will be the processes behind computed tomography, magnetic resonance imaging, nuclear medicine, positron emitting tomography, and ultrasound as it pertains to simulation, detection, and diagnosis of cancer.

RAT1123 Radiation Therapy Patient Care  Credit Hours: 2
This course is designed to give an incoming student an overview of patient care and ethics. Topics that will be covered include communication, patient safety, patient transfers, immobilization of patient and body parts, infection control, vital signs, caring for patient who have special needs, pharmacology, drug administration, case history, universal precautions, isolation techniques and medical legal issues in radiation therapy.
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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>RAT1123L</td>
<td>Radiation Therapy Patient Care Lab</td>
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<td>This course is a practical application of the</td>
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<td>theory taught in RAT 1123, Radiation Therapy</td>
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<td>Patient Care. Topics include patient</td>
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<td>interaction skills, safety procedures, basic</td>
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<td>patient care needs, patient movement and</td>
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<td>handling, infection control, taking vital signs,</td>
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<td>administering oxygen, aseptic techniques, non-</td>
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<td>aseptic techniques, and medical emergencies.</td>
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<td>RAT1210</td>
<td>Introduction to Radiation Therapy Anatomy</td>
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<td>This course is designed to present anatomy and</td>
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<td>its importance to the radiation therapist. A</td>
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<td>survey of the structure of human body as it</td>
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<td>pertains to radiation therapy will consider the</td>
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<td>following: the cell, tissues, glands, skeletal</td>
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<td>system, the spine, pelvis, lower limb, abdomen,</td>
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<td>thorax, upper limb, the neck, and the head.</td>
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<td>RAT1212</td>
<td>Radiation Therapy Imaging Anatomy</td>
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<td>A study of radiographic human anatomy as it</td>
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<td>pertains to identifying organs at risk and</td>
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<td>treatment considerations for radiation therapy.</td>
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<td>Students will study the anatomy of the human</td>
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<td>skeleton and organ systems in both two</td>
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<td>dimensional and three dimensional views.</td>
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<td>RAT1515</td>
<td>Radiation Pharmacology</td>
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<td>This course is designed to discuss the</td>
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<td>pharmacology concepts as it pertains to imaging</td>
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<td>practices of the radiation therapist. This</td>
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<td>course will introduce to the student’s essential</td>
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<td>practices and guidelines of pharmaceutical</td>
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<td>administration essential for imaging and patient</td>
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<td>diagnosis. It will also discuss medical oncology</td>
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<td>drugs and how they are metabolized by the</td>
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<td>RAT1614</td>
<td>Intro to Radiation Therapy Physics</td>
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<td>An introductory study of radiation therapy</td>
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<td>physics to include mathematical principles &amp;</td>
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<td>measurement, atomic structure, electromagnetic</td>
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<td>electrodynamics, electromagnetism, x-ray</td>
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<td>production &amp; interactions.</td>
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<td>RAT1804</td>
<td>Clinic Education I</td>
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<tr>
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<td>Familiarization with the equipment utilized in</td>
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<td>the treatment of patients begins along with</td>
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<td>assisting the therapist in the clinical</td>
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<td>environment, simulation area, patient care</td>
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<td>nursing areas and the mold room. Demonstrations</td>
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<td>of patient leveling skills and beginning basic</td>
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<td>treatments and simulations competencies.</td>
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<td>RAT2021</td>
<td>Principles of Radiation Therapy I</td>
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<td>Content is designed to provide an overview of</td>
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<td>cancer and the specialty of radiation therapy.</td>
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<td>The historic and current aspects of cancer</td>
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<td>treatment will be covered. The roles and</td>
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<td>responsibilities of the radiation therapist</td>
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<td>will be discussed. In addition, treatment</td>
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<td>prescription, techniques and delivery will be</td>
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<td>RAT2022</td>
<td>Principles of Radiation Therapy II</td>
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<td>A continuation of the fundamentals of technologic</td>
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<td>applications in simulation and patient</td>
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RAT2061 Radiation Therapy Seminar  
This course will provide the opportunity for the radiation therapy student to evaluate their cumulative knowledge through comprehensive testing, refinement of accumulated knowledge, and retention of all aspects of radiation therapy. The course challenges the student to be prepared for the American Registry of Radiologic Technologist comprehensive national examination upon completion of graduation.

RAT2241 Radiobiology  
A study of the sequence of events following the absorption of energy from ionizing radiation. Factors influencing radiation effects, tissue sensitivity, tolerance, and clinical applications are considered.

RAT2243 Radiation Oncology Sectional Anatomy  
This course is designed to present sectional anatomy and its importance to radiation therapist in the Radiation Therapy Field. This course will include 3-D imaging identification of anatomical structures in various imaging methods and planes. Location of internal organs and critical structures by topographical anatomy will also be included. The pathophysiology of normal tissues as well as malignant tissues will also be discussed and visualized in 3-D Imaging. An emphasis on etiological considerations, neoplasia, and associated diseases in the radiation therapy patient will also be presented.

RAT2617 Advanced Radiation Physics I  
The fundamentals of x-ray, gamma, and corpuscular radiation as applied to radiation therapy. Teletherapy units and nuclear reactors are also discussed.

RAT2618 Radiation Physics II  
Advanced physics of ionizing radiation including measurements, dosages, absorption, isodose curves, filters, radioactive materials treatment planning, properties of radionuclides, radiation safety and health physics.

RAT2619 Dosimetry & Computer Treatment Planning  
This course will introduce the students to the advanced physics and math calculations they will be required to perform as radiation therapist. The Courses will also describe the physical and geometric factors affecting the applied beam energy and how to correct for these factors. The course will also describe how to modify an applied beam to avoid critical structures while delivering the required dose of radiation. The course will also deal with radioisotopes, how they are utilized to treat cancer patients and their specific energies and decay schemes.

RAT2814 Clinic Education II  
Patient treatment competency assignments continue in radiation therapy departments. The student's responsibilities increase as more complex competencies in patient treatment are mastered, and additional competencies are performed in simulation and the dosimetry area are performed. Student is also introduced into a variety of patient care areas.

RAT2824 Clinic Education III  
Advanced clinical education stressing practical application of dosimetry competencies under the direct supervision of a medical physicist or dosimetrist. Continuation of advanced patient treatment competencies under the supervision of a registered radiation therapist, continuation of simulation procedures and quality assurance testing.

RAT2834 Clinic Education IV  
The most advanced clinical education as evidenced by the level of competency demonstrated by terminal competency skills. The student will also demonstrate their didactic knowledge, technical understanding of treatment planning and basic calculations required of an entry level radiation therapist. Completion of this course will ensure that the student is competent upon graduation to assume all the responsibilities required of an entry level Registered Radiation Therapy Technologists.

RAT2905 Independent Study in Radiation Therapy  
A direct study course in Radiation Therapy. This course is available only for majors who wish to investigate a particular clinical education situation. The student will create an application for the course to the head of the Medical
Imaging Department via an instructor with whom he/she wants to work with.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>REA0007C</td>
<td>College Preparatory Reading I</td>
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<tr>
<td>REA0017C</td>
<td>College Preparatory Reading II</td>
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<td>REA0055</td>
<td>Developmental Reading Module</td>
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<td>REA0056</td>
<td>Developmental Reading Module</td>
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<td>REA1105</td>
<td>College Reading Strategies</td>
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<tr>
<td>RED3342</td>
<td>Foundations of Research Practice in Reading Ed &amp; Application of Instruction</td>
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<tr>
<td>RED4519</td>
<td>Diagnostic &amp; Instructional Interventions in Reading</td>
<td>3</td>
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<tr>
<td>RED4844</td>
<td>Reading Practicum</td>
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<tr>
<td>REE1040</td>
<td>Florida Real Estate Commission I</td>
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This course teaches basic reading skills, vocabulary, word recognition skills, and work-study skills. Placement in REA0007C is determined by PERT test scores.

College Preparatory Reading II teaches basic reading and study skills to prepare students for college course work.

This course is for students who score between 93 and 103 on the PERT placement test. Students will then be given the PERT Diagnostic to identify skills in the developmental reading sequence that have not yet been mastered. An individual learning plan will be established and students will be assigned to the module(s) containing those competencies not yet mastered. Topics for study will be determined by student's P.E.R.T. Diagnostic test results. This course will teach students basic reading and study skills to prepare them for college level course work.

This course is for students who score between 93 and 103 on the PERT placement test. Students will then be given the PERT Diagnostic to identify skills in the developmental reading sequence that have not yet been mastered. An individual learning plan will be established and students will be assigned to the module(s) containing those competencies not yet mastered. Topics for study will be determined by student's P.E.R.T. Diagnostic test results. This course will teach students basic reading and study skills to prepare them for college level course work.

Teaches efficient reading abilities, comprehension, vocabulary, speed, study techniques, and reading skills necessary to conduct investigative research. REA1105 includes all CLAST skills.

This course provides an understanding of the principles of scientific research as the foundation of comprehensive instruction that synchronizes and scaffolds each of the major components of the reading process to assist students in mastering this process. This course will address effective research-based instruction methodology to prevent reading difficulties and promote acceleration of reading progress for struggling students, including students with disabilities, and students from diverse populations. Guided field experience provides pre-professional educators with the experience of observation and interaction with K-12 students.

This course is designed to give students an understanding of how to diagnose and assess students in at least one of the major reading components. Students will develop knowledge to complete a diagnostic case study on a struggling reader. This course will allow students to demonstrate their ability to interpret data, choose appropriate assessments and evaluate results. Students will then implement researched and evidence-based strategies and progress monitor the struggling reader. This course will help students gain knowledge on intensive, explicit, systematic and multisensory interventions. Students will learn how to apply researched and evidence-based instructional practices for diverse learners with different backgrounds and reading disorders, such as dyslexia. Students will complete a field experience with a minimum of 15 hours of observation and interaction in a K-12 setting.

Students will, through this culminating practicum experience, demonstrate knowledge of the components of reading, as well as assessments and data analysis, to implement a comprehensive research-based reading plan of instruction for all learners. Students will engage in the systematic problem solving process. Students are to complete a minimum of 30 hours of field experience in a K-12 setting.

The Real Estate Commission Course I. It provides an introduction to the basic principles and theories of real property, its economic value, and the legal aspects of real estate law affecting salespersons. Successful completion qualifies a candidate to apply for the State of Florida Salesperson's License Exam.
**REE1500 Introduction to Residential Property Management**  
Credit Hours: 3  
Introduces the concepts of income-producing real estate, property management practices, and careers in real estate management. Examines residential property types, including single-family housing, multi-family housing, and mixed-use developments. Presents residential property management practices, including marketing and leasing space, maintaining properties, managing risks, and measuring financial performance.

**REL1210 Old Testament History**  
Credit Hours: 3  
This course is an introduction to old testament history. Using the Hebrew canon, the course will critically examine the narratives of the Hebrew people, main components and development of their religion, important personalities, and the early formation of Judaism.

**REL1240 New Testament History**  
Credit Hours: 3  
This course is a descriptive introduction to the New Testament world, the New Testament, and the development of early Christianity in the First and Second Century A.D.

**REL2000 Introduction to the Study of Religion**  
Credit Hours: 3  
An introduction to the study of religion as an academic discipline. The focus of this course is religion, not religions; an attempt is made to acquaint students with problems and issues in the understanding of religious phenomena. This is a writing course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**REL2300 World Religions**  
Credit Hours: 3  
This course is a descriptive examination of the world's most popular religions. This is a writing course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**REL2930 Special Topics: Religion**  
Credit Hours: 3  
Course centers on topics of current or of special interest to students or instructors. Topics or focus may vary from semester to semester which may include, but are not limited to, Religion in America, Gender and Religion, New Religious Movements, Genocide and Religion or other areas of interest. Transfer credit is the prerogative of the receiving institution.

**RET1024 Introduction to Respiratory Care**  
Credit Hours: 1  
This course offers the student an overview of a career in respiratory care, the critical thinking methodology necessary for applying academic knowledge to problem based learning, and exposure to the level of comprehension needed for understanding the concepts in respiratory care.

**RET1026 Respiratory Therapy Equipment**  
Credit Hours: 3  
This course reviews all of the equipment normally used for respiratory therapy with the exception of mechanical ventilation. Especially emphasized are methods used in manufacturing, storing and administering oxygen; humidity and aerosol therapy, airway management and airway clearance techniques.

**RET1026L Respiratory Therapy Equipment Laboratory**  
Credit Hours: 1  
This course allows the student to work with and master the manipulative skills required to utilize respiratory therapy equipment. Emphasis is on oxygen, humidity and aerosol therapy, and airway management.

**RET1264 Mechanical Ventilation**  
Credit Hours: 3  
This course describes the concepts of mechanical ventilation, current modes of ventilation, tailoring of the ventilator settings to meet patient needs, and patient assessment on mechanical ventilation. The student will learn the concepts of noninvasive ventilation. The principles and operation of commonly used ventilators are emphasized.

**RET1264L Mechanical Ventilation Laboratory**  
Credit Hours: 1  
This course allows the student to work with all facets of mechanical ventilation to gain hands on experience prior to
entering their adult critical care rotation.

**RET1484 Cardio Pulmonary Pathophysiology**  
Credit Hours: 3  
This course is designed to introduce the students to the basic concepts of cardiopulmonary disease. Included are the mechanism of altered lung structure, airway caliber, neurogenic control and pulmonary vascular function.
RET1485 Respiratory Physiology  Credit Hours: 3
This course provides an in-depth study of the anatomy and physiology of the cardiopulmonary system. Included is a review of the physiology of respiration, ventilatory mechanics, neurogenic control, internal and external respiration and gas exchange.

RET1832L Respiratory Therapy Clinic I  Credit Hours: 3
In this first clinical course, the students are oriented to the care of patients in the non-critical care setting. Tasks included are oxygen administration, medicated and non-medicated aerosol administration, chest physiotherapy, and airway care. Emphasis is on patient assessment, therapeutic intervention, and communication.

RET1833L Respiratory Therapy Clinic II  Credit Hours: 3
This clinic course represents continuation of the activities in Clinic I. By the end of this term the student must have mastered all non-critical care duties normally performed by respiratory therapists and the fundamentals of adult critical care.

RET2234L Cardiopulmonary Function & Simulation  Credit Hours: 1
This course allows students the opportunity to build hands-on skills with bedside pulmonary function testing and the six-minute walk test. Students will also practice cardiopulmonary clinical practice and critical thinking skills in a simulation-based environment.

RET2265 Advanced Respiratory Equipment  Credit Hours: 2
This course introduces students to more advanced monitoring techniques in the areas of ventilation and oxygenation for the adult, pediatric and neonatal patient.

RET2265L Advanced Respiratory Equipment Laboratory  Credit Hours: 1
This course provides hands on interaction for students to learn the techniques of more advanced monitoring in the areas of ventilation and oxygenation for the adult, pediatric and neonatal patient.

RET2286C Management of the Intensive Care Patient  Credit Hours: 2
This course provides an in-depth discussion of several disease processes of the lung as well as other issues concerning the respiratory intensive care patient. This course fosters the physician to student relationship by providing physician lectures and clinical rounds with physicians.

RET2414 Respiratory Therapy Pulmonary Function  Credit Hours: 1
This course reviews techniques used for pulmonary function testing, blood gas analysis and the basic principles of cardiopulmonary stress testing. Techniques used in the diagnosis of cardiopulmonary disease are covered.

RET2418 Cardiopulmonary Diagnostics & Techniques  Credit Hours: 2
This course is designed to prepare the student to be a competent member of the resuscitation team, to assess cardiac function via EKG's and hemodynamic monitoring, and to prepare the student for advanced cardiac life support training.

RET2601 Respiratory Therapy Management  Credit Hours: 1
This course is designed to assist the student in successfully making the transition from the role of a student to that of a competent member of the health care team. Objectives include advanced cardiac life support certification and becoming a member of the national and state organization for respiratory care. Emphasis is placed on preparation and application for the national credential examinations and for the Florida state license.

RET2714 Pediatric & Neonatal Respiratory Care  Credit Hours: 3
This course emphasizes neonatal and pediatric diseases, their etiology and treatment. It encompasses the newest equipment and latest techniques used in monitoring and maintaining the respiratory compromised infant and pediatric patient.
RET2834L Respiratory Therapy Clinic III  Credit Hours: 3
This clinical course is designed to introduce the student to all aspects of respiratory critical care. The students will work with patients in critical care with many different respiratory diseases and disorders. The students may also have the opportunity to work with neonatal and pediatric patients in the critical care environment. The student must be able to independently manage care for three critical care patients by the end of the semester. Special fee is charged.

RET2835L Respiratory Therapy Clinic IV  Credit Hours: 3
This is a continuation of the activities in Clinic III. The student's responsibility will increase as their clinical skills become more sophisticated. By the end of this term the student will assume all of the responsibilities required of critical care therapists with patients requiring ventilatory management or support. Special fee is charged.

RET2934 Selected Topics in Respiratory Care  Credit Hours: 1
This course will present information on recent changes in technology and therapeutic modalities used in Respiratory Care. The student will participate in literature review activities to enable them to remain knowledgeable of ongoing changes in the profession after they become Respiratory Care practitioners.

RMI2110 Personal Insurance Planning  Credit Hours: 3
The course includes methods of analysis in handling personal risk exposures, including insurance coverage alternatives. Integration of life, health and accident, property, liability, profit-sharing, private, governmental insurance and pension programs are also included. The specifics of how the State of Florida implements each type of insurance will be emphasized.

RMI2212 Personal Business & Property Insurance  Credit Hours: 3
This course provides an overview of personal and business property risks and coverages which may be used in dealing with these risks, including the underwriting, marketing and social problems associated with these coverages. The specifics of how the State of Florida implements each type of insurance will be emphasized. Additional topics include commercial and residential fire insurance, inland marine and transportation coverages, and multi-peril contracts.

RMI2662 Introduction to Risk Management & Insurance  Credit Hours: 3
This course is an introduction to the principles, practices, and economics of insurance. Topics include fire, life and casualty contracts, and various types of business and contingency risks. The specifics of how the State of Florida implements and regulates each type of insurance will be emphasized.

RTE1000 Introduction to Radiologic Technology  Credit Hours: 3
The organization and operation of a radiology department; radiologic topics include: x-ray equipment operation, historical aspects of radiography, department organizational structure, safety, radiation protection, imaging media and receptors, image processing techniques, basic exposure factors, and accreditation and professional development.

RTE1111 Patient Care I  Credit Hours: 3
A study of the principles and practices of patient care during radiographic examinations. Topics include basic x-ray equipment operation, medical ethics and law, patient assessment and communication, patient care and safety, infection control, vital signs and oxygen administration, medical emergencies and trauma and care of pediatric and geriatric patients, and patient care during urologic and gastrointestinal examinations.

RTE1111L Patient Care I Laboratory  Credit Hours: 1
Practical application of theory taught in RTE1111. Topics include operating radiographic equipment, patient communication, basic patient care needs, controlling infection, patient transfers, immobilization, administering oxygen, and taking vital signs.

RTE1418 Imaging I  Credit Hours: 3
A study of radiographic physics, equipment, and the production and properties of x-radiation. Topics include mathematical principles, atomic theory, electricity, electromagnetism, x-ray tubes and equipment, the production and characteristics of x-radiation, filtration, exposure factors, x-ray interactions and attenuation, beam restriction and grids.
RTE1418L Imaging I Laboratory
Practical application of theory taught in RTE1418. Topics include film and digital-based imaging, the radiographic darkroom, radiographic test equipment, the x-ray tube, prime factor relationships, beam restriction and grids.

RTE1503 Radiographic Procedures I
A study of radiographic procedures of the chest, abdomen, upper limb, humerus and shoulder girdle, and bony thorax. Topics include radiographic terminology and positioning principles, imaging and radiation protection principles, and radiographic procedures of the chest, upper airway, abdomen, fingers, hand, wrist, forearm, elbow, humerus, shoulder, clavicle, scapula, AC joints, ribs, sternum, and SC joints.

RTE1503L Radiographic Procedures I Laboratory
Practical application of theory taught in RTE1503. Topics include orientation to the x-ray lab, utilization of positioning principles, and demonstrated performance of radiographic procedures of the chest, abdomen, upper limb, humerus and shoulder girdle, and bony thorax.

RTE1513 Radiographic Procedures II
A study of radiographic procedures of the lower limb, femur and pelvic girdle, biliary tract, upper and lower gastrointestinal systems, urinary system, and pediatric radiography. Topics include radiographic procedures of the toes, foot, calcaneus, ankle, tibia/fibula, knee, patella, femur, hip, pelvis, esophagus, stomach (UGI), biliary tract (T-tube cholangiogram & ERCP), small bowel (SBS), colon (contrast enema), urinary system (IVU and cystograms), and common pediatric examinations.

RTE1513L Radiographic Procedures II Laboratory
Practical application of theory taught in RTE1513. Topics include demonstrated performance of radiographic procedures of the lower limb, femur & pelvic girdle, upper and lower gastrointestinal systems, urinary system, and pediatric examinations.

RTE1523 Radiographic Procedures III
A study of radiographic procedures of the cervical spine, thoracic spine, lumbar spine, sacrum & coccyx, skull & cranial bones, facial bones & sinuses, and related trauma, mobile, and pediatric examinations. Students will study the radiographic positions/projections for each body part and its associated anatomy.

RTE1523L Radiographic Procedures III Laboratory
Practical application of theory taught in RTE1523. Topics include demonstrated performance of radiographic procedures of the cervical, thoracic and lumbar spines, sacrum and coccyx, skull, facial bones and paranasal sinuses, trauma and surgical examinations.

RTE1613 Radiographic Physics
Introduction to the fundamentals of physics involved in the operation of radiographic equipment to include: units of measurement, matter, energy, mechanics, magnetism, electrostatics, and electrodynamics.

RTE2763 Computed Tomography & Cross-Sectional Anatomy
Introduction to computed tomography (CT) imaging, procedures, & cross-sectional anatomy. Topics include the history of CT development, basic physics & operational principles, equipment & scanner designs, data acquisition, image reconstruction & visualization, the performance of CT procedures, cross-sectional anatomy, and safety considerations for operators & patients.

RTE1804 Clinical Education I
Clinical experience for practical application of concepts and skills taught in lecture and laboratory. Clinical rotations include hospital and departmental orientation, the main imaging department, portables, the emergency room, and other ancillary patient care areas. Students will perform radiographic exams of the chest, abdomen, upper limb, humerus and shoulder girdle, and bony thorax.
RTE1814 Clinical Education II
Credit Hours: 2
Clinical experience for practical application of concepts and skills taught in lecture and laboratory. Clinical rotations include the main imaging department, portables, the emergency room, and other ancillary patient care areas. Students will perform radiographic examinations of the lower limb, femur and pelvic girdle, biliary tract, upper and lower gastrointestinal systems, urinary system, pediatric radiography, and procedures previously learned.

RTE1824 Clinical Education III
Credit Hours: 2
Clinical experience for practical application of concepts and skills taught in lecture and laboratory. Clinical rotations include the main imaging department, portables, the emergency room, the operating room, and other ancillary patient care areas. Students will perform radiographic exams of the spine and head, surgical exams and procedures previously learned.

RTE2061 Radiography Seminar
Credit Hours: 1
A review of the topics studied during the Radiography Program to help students prepare for the American Registry of Radiologic Technologists (ARRT) Certification Exam and to transition to the role of professional caregiver. Topics include the ARRT exam, Florida licensure, patient care, safety, image production and procedures.

RTE2112 Patient Care II
Credit Hours: 3
A study of the principles and practices of patient care during medical procedures & advanced radiographic examinations. Topics include alternative medical treatments, electrocardiography, aseptic technique, pharmacology, drug administration, venipuncture, and patient care during advanced imaging & therapeutic modalities.

RTE2116 Patient Care II
Credit Hours: 3
A study of the principles and practices of patient care during medical procedures & advanced radiographic examinations. Topics include alternative medical treatments, electrocardiography, aseptic technique, pharmacology, drug administration, venipuncture, and patient care during advanced imaging & therapeutic modalities.

RTE2130 Pharmacology & Venipuncture for Radiography
Credit Hours: 1
A study of pharmacology & venipuncture related to the administration of drugs & contrast media for radiographic examinations. Topics include pharmacology principles, parenteral contrast media, drug administration, & venipuncture technique.

RTE2385 Radiation Biology & Protection
Credit Hours: 3
Study of the biological effects associated with exposure to ionizing radiation and accepted radiation protection principles and practices. Topics include principles and practices of radiation protection, radiation/matter interaction modes, cellular and molecular biology, tissue and total body biological response patterns, radiation detection and measurement, dose limits, and the protection & management of patients and personnel.

RTE2457 Imaging II
Credit Hours: 3
A study of radiographic physics, equipment, and the factors that affect radiographic image quality. Topics include digital radiography and PACS, fluoroscopy, x-ray interactions and attenuation, image receptor exposure, contrast, distortion, spatial resolution, exposure systems and AEC, and quality management.
RTE2457L Imaging II Laboratory Credit Hours: 1
Practical application of theory taught in RTE2457. Topics include digital imaging exposure relationships, factors that affect image receptor exposure and density, contrast, distortion, and spatial resolution, automatic exposure control, quality control, and the development of technique charts.
RTE2533 Radiographic Procedures IV  Credit Hours: 2
A study of radiographic procedures to include computed tomography (CT), surgical radiography, arthrography, hysterosalpingography, myelography, sialography, orthoroentgenography, mammography, bone densitometry, angiography & interventional examinations, magnetic resonance imaging (MRI), sonography, nuclear medicine, & radiation therapy. Students will study the radiographic positions/projections for each body part/procedure and its associated anatomy.

RTE2563 Advanced Image Modalities, Procedures, & Pathologies  Credit Hours: 3
A study of radiographic procedures to include surgical radiography, arthrography, hysterosalpingography, myelography, sialography, orthoroentgenography, mammography, bone densitometry, angiography & interventional examinations. Students will study the radiographic positions/projections for each body part/procedure and its associated anatomy. In addition, students will study human pathology of the cardiovascular, nervous, endocrine, biliary and reproductive systems with radiologic imaging considerations.

RTE2623 Radiographic Equipment & Quality Assurance  Credit Hours: 3
A study of the physical basis of operation of radio-graphics equipment. Emphasis includes x-ray equipment components, x-ray tubes, image tubes, intensifiers, TV monitors and video recorders, serial imaging, generators, image subtraction techniques, digital equipment, non-film imaging equipment, accessory equipment, x-ray production and interaction processes, Quality Assurance and CT equipment.

RTE2782 Radiographic Pathology  Credit Hours: 1
An introduction to the study of human disease and the radiographic appearances of specific diseases. Topics will include: Pathogenesis, disease classification systems, and the study of specific diseases of the respiratory, skeletal, gastrointestinal, hepatobiliary, urinary, cardiovascular & hematopoietic, nervous, endocrine and reproductive systems with radiologic imaging considerations.

RTE2834 Clinical Education IV  Credit Hours: 3
Clinical experience for practical application of concepts and skills taught in lecture and laboratory. Clinical rotations include the main imaging department, portables, the emergency room, the operating room, computed tomography (CT), and other ancillary patient care areas. Students will perform CT examinations and radiographic procedures previously learned.

RTE2844 Clinical Education V  Credit Hours: 3
Clinical experience for practical application of concepts and skills taught in lecture and laboratory. Clinical rotations include the main imaging department, portables, the emergency room, the operating room, computed tomography (CT), magnetic resonance imaging (MRI), nuclear medicine, sonography, radiation therapy, interventional and cardiac catheterization labs, and other ancillary patient care areas. Students will perform CT examinations and radiographic procedures previously learned and observe procedures in other diagnostic/therapeutic modalities.

RTE2854 Clinical Education VI  Credit Hours: 1
Clinical experience for practical application of concepts and skills taught in lecture and laboratory. Clinical rotations include the main imaging department, portables, the emergency room, the operating room, and other ancillary patient care areas. Students will perform radiographic procedures previously learned.

RTE2905 Independent Study in Radiography  Credit Hours: 1
Clinical experience for practical application of concepts & skills taught in lecture & laboratory. Clinical rotations include the main imaging department, portables, the emergency room, the operating room, & other ancillary patient care areas. Students will receive additional instruction, practice, & be evaluated on radiographic procedures previously learned.

RTV2000 Introduction to Radio & Television  Credit Hours: 3
An introduction to the broadcast media through which the students should gain an understanding of the historical, technical, legal, and critical aspects of radio and television media.
RTV2102 Broadcast Writing
Credit Hours: 3
Designed to give students an opportunity to learn the style of presentation for different types of media/broadcast scripts. The course will emphasize practical broadcast writing skills, radio and television copy techniques and forms of commercial copy, as well as learning the special rules and regulations governing the presentation of materials "over the air."

RTV2241C Television Production I
Credit Hours: 3
In this course the student will acquire understanding of the theory and practice of television program production and directing with emphasis on studio production.

RTV2949 Co-Op Work Experience
Credit Hours: 3
A course designed to provide training in a student field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by students and employer. Prerequisite: Co-Op department approval. Student will be assigned specific course prefixes related to their academic major prior to registration.

RUS1120 Beginning Russian I
Credit Hours: 4
Fundamentals of speaking, understanding, reading and writing in Russian.

RUS1121 Beginning Russian II
Credit Hours: 4
Continuation of RUS1120. Further development of the basic skills. Selected readings.

SCE3320 Integrative Teaching Methods in Middle Grades
Credit Hours: 3
This inquiry-based course involves active participation and reflection of the learning process which will promote the growth and development of equitable middle school science constructs. The Pre-service educator will apply knowledge previously acquired in individual content science Courses and communicate them by designing an integrated and lab-based science curriculum unit. Students will be required to spend 2 non-credit hours per week for a mandatory 20 hours as part of a field experience component. Course completers will teach integrated science concepts using the inquiry processes as the basis for teaching and learning Science in middle schools.

SCE3420 Methods of Teaching Physical Sciences in the Middle School
Credit Hours: 4
This course is a study of the fundamental concepts of physical science as part of teaching science in grades 5-9. This course focuses on three elements: content knowledge, inquiry and other teaching strategies, and use of multimedia and visualization tools in teaching and learning about physical science. This course incorporates methods and metacognitive strategies for learning and teaching, including scientific reasoning, prediction, and abstract and critical thinking, and helps educators optimize their science teaching experiences. Through the readings, videos, discussions, assignments, and other interactive experiences, learners in this course will have multiple opportunities to develop content knowledge about transfer of energy; light, sound, and waves; mechanisms of heat transfer; and solubility and density.

SCE3941 Teaching Middle & Secondary School Sciences
Credit Hours: 4
Science educators are faced with many unique sets of circumstances that are not encountered in other disciplines. These include unique legal and safety considerations, equipment acquisition and organization, and participation in programs that provide key resources. This course shall prepare the pre-professional science educator with some of the key tools and strategies that are utilized in the science class room. Each unit focuses on one of the major areas that science educators will experience. The course is presented as a series of hands on experiences in which the student is involved in graded planning or concept exercises, followed by observed and graded application or execution of those plans.

SCE4310 Science in the Elementary School
Credit Hours: 1
This course introduces conceptually and develop-mentally appropriate Science content based on the five content areas identified by the Florida Sunshine State Standard. These are knowledge of the nature of matter, knowledge of forces, motion, and energy, knowledge of Earth and space, knowledge of life science, knowledge of the nature of science,
knowledge of the relationship of science and technology. Within these content areas, preprofessional educators will learn techniques consistent with the national process standards and research-based procedural strategies. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required for teacher certification.

**SCE4330 Methods & Strategies of Teaching Biological**

This course is designed to introduce methods and strategies that have been proven to be effective for teaching secondary biology. This course will include topics in appropriate instructional techniques and selection of appropriate resources for diverse classroom activities. Students will learn principles of effective curriculum design and assessment and how to apply these principles by designing and developing interactive biology projects for secondary school students including real world applications.

**SCE4943 Student Teaching in Science**

Credit Hours: 12

The Science Student Teaching course is designed to provide interns with a field-based experience at the appropriate grade in a Science classroom/laboratory. Through the Science Student Teaching course, the interns will implement and master the 6 Florida Educators Accomplished Practices. The course will focus on Science Education topics in relation to the Student Teaching experience and teaching profession. Note: The Internship is composed of a minimum of 37.5 contact hours per week for 15 weeks.

**SCE4944 Student Teaching in Science**

Credit Hours: 11

**SCE4945 Student Teaching in Science**

Credit Hours: 10

(Credit hours of the internship are dependent on the student's effective term.)

The Science Student Teaching course is designed to provide interns with a field-based experience at the appropriate grade in a Science classroom/laboratory. Through the Science Student Teaching course, the interns will implement and master the 6 Florida Educators Accomplished Practices. The course will focus on Science Education topics in relation to the Student Teaching experience and teaching profession. Note: The Internship is composed of a minimum of 37.5 contact hours per week for 15 weeks.

**SCM1010 Introduction to Transportation & Logistics**

Credit Hours: 3

This course deals with the role of logistics in the economy and the organization. Topics explored are customer service, logistics information systems, inventory management, material management and supply chain management. The objective is to explore the full scope of the transportation plant and its services as a necessary preparation to efficient use of the transportation system.

**SCM1154 Supply Chain Management**

Credit Hours: 3

This course presents an integrated approach to the management of activities involved in moving goods and services from suppliers to customers. The course will focus on what employees and managers must do to ensure an effective supply chain exists in their organization. Students will learn about SCM functions, warehousing, purchasing and inventory, e-commerce, information flow and customer service.

**SCM1510 Manufacturing and Service Operations**

Credit Hours: 3

This course teaches the operations function as a function that takes inputs and transforms them to outputs which meet customer requirements. Manufacturing outputs may take the form of materials, components, parts, or finished products. Service operations come in a wide variety of situations such as: repair operations, equipment set up operations, or event management services. The importance of managing operations processes is also introduced. The types of decisions that are made to ensure the design of effective and efficient operating processes is reviewed.

**SCM2098 Warehouse Operations**

Credit Hours: 3

This course will enable students to understand the various functions involved in the operation of a warehouse. Key elements include: the role of warehousing in the supply chain, storage and handling techniques, performance metrics, customer service considerations, and safety concerns across various types of distribution facilities.

**SCM2131 Introduction to Procurement**

Credit Hours: 3

This course presents current and thorough coverage in the critical area of procurement for logistics managers. Students gain insight and knowledge into the strategies, processes, and practices of procurement, including demands placed on procurement managers, the ethical, contractual and legal issues faced by procurement professionals, and the impact of procurement and supply chain management on the competitive success and profitability of the organization.
SCM2163 Customer Service/Customer Relationship Management  Credit Hours: 3
This course will enable students to understand Customer Relationship Management (CRM) and Customer Service Operations (CSO) as it refers to practices, strategies and technologies that companies use to manage and analyze customer interactions and data throughout the customer lifecycle, with the goal of improving business relationships with customers, assisting in customer retention and driving sales growth. CRM and CSO key performance elements include compiling information on customers across different channels, points of contact between the customer and the company, which could include the company's website, telephone, live chat, direct mail, marketing materials and social media. CRM and CSO systems provide customer service staff detailed information on customers' personal information, purchase history, buying preferences and concerns. Additionally, this course incorporates oral communications as it relates to CSO.

SCM2520 Six Sigma Yellow Belt Body of Knowledge  Credit Hours: 3
The units in this body of knowledge include learning objectives in the form of specific learning outcomes and the cognitive level at which test questions will be written. This information will provide guidance for the candidate preparing to take the exam. The specific learning outcomes are not intended to limit the subject matter or be all-inclusive of what might be covered in an exam. It is meant to clarify the type of content to be included in the exam. Although the intent of this is to prepare a candidate to take the Six-Sigma Yellow Belt certification, the content is, none-the-less, significantly valuable to any supply chain management curriculum. The descriptor in parentheses at the end of each entry refers to the maximum cognitive level at which the topic will be tested.

SCM3132 Procurement Management  Credit Hours: 3
This course presents current and thorough coverage in the critical area of procurement for logistics managers. Students gain insight and knowledge into the strategies, processes, and practices of procurement, including demands placed on procurement managers, the ethical, contractual and legal issues faced by procurement professionals, and the impact of procurement and supply chain management on the competitive success and profitability of the organization.

SCM3155 Supply Chain Management II  Credit Hours: 3
This course is an overview of logistics' functions within a firm and in the context of integrated vertical systems. Topics include customer service, information flow, inventory control, materials management, order processing, packaging, and physical distribution.

SCM3163 Supply Chain Quality Management  Credit Hours: 3
This course focuses on quality enhancement methodologies within the supply chain. Students will learn how to assess the current position of a firm and identify an effective strategy for improvement based on a profound understanding of the company, market, processes, and customers.

SCM3936 Seminar/Special Topics  Credit Hours: 3
This course focuses on current and emerging issues in supply chain management. Its format and topic will vary, but will include a full day or a half day seminar conducted by one or more industry experts who will address specific supply chain management topics such as customer service, logistics information systems, inventory management, material management, warehousing, purchasing and inventory, e-commerce, global trade, order processing, physical distribution, transportation, import-export compliance, or other supply chain management issues. Specific requirements will vary based on topic assignments.

SCM4602 International Law & Supply Chain Management  Credit Hours: 3
This course will expose students to the legal implications of transacting business across national borders. The focus will be on transactional international business law as applied to supply chain management. Topics will include the legal and ethical environment of international business, international contracting, importing-exporting trade finance, employment and labor in the global marketplace, manufacturing workplace conditions overseas, transnational sharp anti-trust activities to avoid, and international intellectual property law and licensing. The student will gain an appreciation of the special risks of conducting business internationally and the legal pitfalls associated with those risks that confront supply chain managers on a daily basis.

SCM4153 Applied Production/Operations Management  Credit Hours: 3
This course provides management and analytical concepts/tools for the management of operations and the decision-making process within the scope of the supply chain. Recently, operations strategy has provided companies with a competitive advantage in supply chains and transportation. Decision-making regarding operational issues is one of the most common tasks within organizations. This course will enable the student to perform the quantitative analysis necessary and understand the management issues in order to make good operational decisions within the supply chain.

SCM4221 Health Care & Supply Chain Credit Hours: 3
In this course, students will focus on current management methodologies within the health care supply chain. This supply chain ensures that the technology of care is available to the physician, surgeon, nurse, clinician, or caregiver at the right time, at the right place, and in sufficient quantity and quality for superior health outcomes for patients within the healthcare system. Students will learn how to assess the current position of a firm and identify an effective strategy for healthcare supply chain improvement based on a profound understanding of the company, market, processes, and customers.

SCM721 Global Logistics/Import & Export Credit Hours: 3
This course encompasses logistics activities of multinational firms, international transportation systems, global sourcing, customer service, facility location, inventory management, customs issues, export-import activities, and the role of governments.

SCM4910 Supply Chain Management Capstone Credit Hours: 3
This course is intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and reporting.

SCM4945 Supply Chain Management Option (1) Internship or Option (2) Practicum Credit Hours: 3
This course is a practical application in a clinical setting of knowledge acquired in the classroom.

SLS1001 Strategies for Success Credit Hours: 3
This course is tailored for First Time in College students and provides opportunities to: learn about Broward College and higher education; acquire and practice learning strategies; explore personal learning styles; identify career options; and develop life-long skills for responsible citizenship.

SLS1103 Foundation Course Credit Hours: 3
This course is tailored for First Time in College students and provides opportunities to learn about professional behaviors that lead to academic and “knowledge work” career success such as developing self-discipline, leading self-managed teams, and creating effective teams composed of individuals with different working styles.

SLS1261 Leadership Credit Hours: 3
The purpose of this course is to provide effective leadership skills for student leaders to help them develop an ethical, value grounded leadership style for future educational, organizational and community leadership roles.

SLS1272 Team Self-management & Career Exploration Credit Hours: 3
This course provides an introduction to Team Self-Management (TSM) theory and practice of team self-management and its application in work organizations; explores the connections between one's purpose and intentions and one's behaviors and develops the self-management skills to successfully attain one's goals. The course provides an introduction to career exploration and planning.

SLS1501 College Success Skills Credit Hours: 1
This course is designed primarily for first year students at Broward College. It serves as an introduction to the College and assists students in coping with challenges of college life, clarifying their goals, learning strategies and skills in order to ensure student success and degree completion. Topics include test-taking, note-taking, listening skills, memory techniques, academic regulations, college resources, and career exploration.

SLS2271 Team Self-management with Social Justice Topics Credit Hours: 3
This course provides students with the theory and practice of team self-management. It includes leading and working
on a self-managing team, and developing project management skills. This course will also help students develop awareness of social justice topics so that they may gain an in-depth understanding of a social justice issue through utilizing primary based research, and scenario planning methodologies.

**SLS2715 Student Leadership Development**  
Credit Hours: 1  
The purpose of this course is to provide effective leadership skills for student leaders to help them develop an ethical, value grounded leadership style for their role as peer mentors and advocates.

**SCM4542 Supply Chain Modeling**  
Credit Hours: 3  
This course will enable students to create quantitative models in Microsoft Excel, as supporting tools in decision-making. The course will follow the case study method, exposing students to business situations typically encountered by Supply Chain Management professionals. Students will learn how to select the applicable tool to address the situation described in every case, create the corresponding quantitative model, write objective recommendations derived from the analysis, and present these in a simulated boardroom meeting environment. The course will cover Decision Analysis, Linear Regression Modeling, Forecasting Methods, Optimization Modeling, and Monte Carlo Simulation.

**SON1003L Fundamentals of Sonography Laboratory I**  
Credit Hours: 1  
This course incorporates an introduction to ultrasound scanning techniques using ultrasound equipment to practice the principles and protocols to the performance of adequate diagnostic sonographic imaging and Doppler procedures in a supervised setting.

**SON100L Principles & Protocols of Sonographic Imaging**  
Credit Hours: 2  
An introduction to the basic approaches to sonographic scanning and scanning protocols for the abdomen and pelvis.

**SON1111 Abdominal Sonography I**  
Credit Hours: 2  
An introduction to the cross-sectional anatomy of the abdominal area and its recognition on sonographic visualization systems.

**SON1112 Abdominal Sonography II**  
Credit Hours: 2  
An in-depth presentation of sonographs of the abdominal area stressing deviations from the norm and the studies to make a diagnostically acceptable study.

**SON1121 Sonographic OB/GYN I**  
Credit Hours: 2  
An introduction to the cross-sectional anatomy of the female reproductive system with and without an existing pregnancy. The sonographic recognition of the normal throughout all terms of pregnancy is presented.

**SON1122 Sonographic OB/GYN II**  
Credit Hours: 2  
The detection of anomalies, pathology, deviation from normal and the planes which must be sonographically imaged for accurate diagnosis is stressed.

**SON1141 Small Parts Sonography**  
Credit Hours: 2  
A general introduction to the areas of carotid, eye, thyroid, prostate, scrotum, breast and other superficial structures.

**SON1170 Sonography of the Circulatory System**  
Credit Hours: 2  
An introduction to the hemodynamics of the circulatory systems and the sonographic imaging and Doppler assessment of the cardiac and vascular structures.

**SON1211 Medical Sonographic Physics I**  
Credit Hours: 3  
A study of the principles of diagnostic ultrasound, the fundamental properties of ultrasonic physics, stressing tissue interactions, and interfaces. Focusing characteristics, methods, intensity, and power considerations are introduced along with system resolution considerations.

**SON1212 Medical Sonographic Physics II**  
Credit Hours: 3
A continuation of the study of the properties of diagnostic ultrasound stressing the operation of diagnostic equipment, the display systems, biological effects and quality assurance methods. Current developments in ultrasound are reviewed, discussed, and evaluated.

**SON1214 Practical Aspects of Sonography I**
Credit Hours: 2
A study of the principles of diagnostic ultrasound and practical aspects of scanning techniques, film critique, film identification and patient care and handling as related to sonographic examination. Stressing the operation of diagnostic ultrasound equipment and routine images obtained.

**SON1215 Practical Aspects of Sonography II**
Credit Hours: 2
Offering more advanced principles of diagnostic ultrasound, adding knowledge of pathological processes. Further presenting the practical aspects of scanning techniques, film critique, film identification and patient care and handling as related to sonographic examination. Stressing the correlation of all patient data, including sonographic images obtained to assist in the differential diagnosis process.

**SON1804 Clinic A**
Credit Hours: 2
Clinical education requiring application of the knowledge learned. Professionalism and personal interaction are stressed along with technical abilities. As the student progresses he or she will be performing examinations with less and less supervision.

**SON1814 Clinic B**
Credit Hours: 2
A continuation of the learning by doing process where more responsibility in the form of decision making regarding anatomical areas and resultant imaging is assumed by the student being supervised.

**SON1824 Clinic C**
Credit Hours: 3
This clinical course is designed to provide students the opportunity to make judgmental decisions regarding technical aspects, to interact in a professional manner with those with whom he/she comes in contact with, and to generally progress to the point where, after successful testing, he/she may be accepted as a competent sonographer for general sonographic exams.

**SON2013L Fundamentals of Sonography Laboratory II**
Credit Hours: 1
This course incorporates ultrasound scanning techniques using ultrasound equipment to practice the principles and protocols to the performance of adequate diagnostic sonographic imaging and Doppler procedures in a supervised setting.

**SON2061 Seminar in Sonography**
Credit Hours: 1
A discussion and presentation seminar course on interpersonal skill refinement, employment techniques, and career development. The course also provides a comprehensive curriculum review of all aspects of Sonography and presents details on applying for licensure as students prepare for the transition to the work place.

**SON2171 Vascular Sonography**
Credit Hours: 3
Venous and arterial anatomy and hemodynamic functions, both normal and abnormal are stressed. Sonographic imaging techniques for vascular structures and Doppler spectral analysis of normal and pathological patterns are also studied. Student must be an American Registry for Diagnostic Medical Sonography (ARDMS) Registered Sonographer. Special Fee Charged.

**SON2175 Vascular Sonography II**
Credit Hours: 3
Arterial anatomy below the neck and head, and its hemodynamic functions, both normal and abnormal, are stressed, along with sonographic imaging techniques for arterial vascular structures, non-imaging testing modalities, and Doppler analysis of normal and abnormal flow patterns.

**SON2176 Vascular Sonography III**
Credit Hours: 3
Venous and arterial anatomy and hemodynamic functions of the circulatory system of the neck and head, both normal and abnormal, are stressed, along with sonographic imaging techniques for vascular structures and Doppler analysis
of normal and abnormal flow patterns. An understanding of the process of test validation and interpretation of test results will be covered.

**SON2400 Introduction to Echocardiography**

Anatomy of the heart and the procedures used in screening are introduced stressing recognition of the normal verses abnormal.

**SON2400L Introduction to Echocardiography Laboratory**

Laboratory sessions for Introduction to Echocardiography Laboratory (SON2401L) are designed to provide opportunities for the students to practice basic skills of sonographic scanning techniques of normal cardiac structures including real-time and Doppler scanning techniques. Performance of special tests will be practiced on a cardiac simulator. This course incorporates basic ultrasound scanning techniques using ultrasound equipment to practice the principles and protocols to the performance of basic Cardiac diagnostic sonographic imaging and Doppler procedures in a supervised setting.

**SON2401 Echocardiography II**

An in-depth presentation of the intricacies of diagnostic ultrasound as it applies to the heart and the chest stressing its capabilities and its limitations.

**SON2401L Echocardiography II Laboratory**

Laboratory sessions for Echocardiography II Laboratory (SON2401L) are designed to provide opportunities for the students to practice advanced skills of sonographic scanning techniques of normal and abnormal cardiac structures including real-time and Doppler scanning techniques. Performance of special tests will be practiced on a cardiac simulator. This course incorporates advanced ultrasound scanning techniques using ultrasound equipment to practice the principles and protocols to the performance of entry-level Cardiac diagnostic sonographic imaging and Doppler procedures in a supervised setting.

**SON2834 Clinic D**

A course designed to add additional clinical competencies to those gained in the specialties mastered in the first year. Emphasis on specialty of echocardiography with clinical application of classroom material presented. To continue to make judgment decisions regarding the technical aspects of diagnostic sonographic exams.

**SON2844 Clinic E**

Application of all the materials presented requiring the student to interact in a professional manner, to make judgment decisions regarding the technical aspects, and to generally progress to the point where he/she may be accepted as a competent sonographer. Further mastering of all skills gained, emphasizing echocardiography and cardiovascular examination techniques. Clinical application of classroom material presented.

**SOP2002 Social Psychology**

This course provides scientifically based constructs used in understanding social phenomena and their impact on the individual. Identification of the social and psychological variables that give human behavior a predictable base is stressed. Topics considered include human nature, psychological development, sex role identification love, affiliation, aggression, image management, attitudes, opinion manipulation, morality, leadership, group dynamics, attribution and construct theory. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

**SOW2020 Introduction to Social Welfare**

This is a beginning course in the behavioral science based field of social work. It aims at introducing the student to the historical, political policy and methodological systems that have interacted to produce the institutions of welfare services and the profession of social work.

**SOW2054 Social Service Field Experience I**

A survey and orientation to organization, and operations of the social service setting. Contact with and participation in social service agencies to make students aware of community resources is a goal of this course. Part of the course's
activities can include volunteer participation in an agency or a supervised review of an agency in which a person is employed.

**SPC1024 Introduction to Speech Communication**  
**Credit Hours: 3**  
This course is designed to provide students with fundamental training and practical experience for researching, organizing, and delivering speeches in public situations. Topics include: audience analysis, speech anxiety, critical listening, and preparation and delivery of informative, persuasive, and other possible types of public speeches in various cultural context with emphasis on academic and scholarly research. Students will also learn to effectively incorporate audio and visual aids/technologies for effective speeches. This is an International/Intercultural competency course.

**SPC1511 Argumentation & Debate**  
**Credit Hours: 3**  
The student, upon completion of this course, should achieve proficiency in the principles of argumentation including analysis, evidence, inference, and refutation as they pertain to the debate situation in democratic society.

**SPC1608 Introduction to Public Speaking**  
**Credit Hours: 3**  
This course is designed to provide students with fundamental training and practical experience for speaking in public, business, and professional situations. Topics include: audience analysis, speech anxiety, critical listening, and preparation and delivery of speeches in various cultural contexts. Students will also learn to effectively incorporate audio and visual aids/technologies for effective speeches. This is an International/Intercultural competency course.
**SPC2300 Introduction to Interpersonal Communication**  
Credit Hours: 3  
Upon the completion of this course the student should demonstrate an understanding of the basic concepts of interpersonal communication with emphasis on perception, self-awareness, the impacts of culture diversity, listening, dyadic communication, verbal and non-verbal communication, small group communication, interpersonal relationships, and conflict management.

**SPN1000 Elementary Spanish Conversation**  
Credit Hours: 3  
This course concentrates on the development of oral and conversational skills and is designed for the everyday use of the Spanish language. One hour language laboratory practice recommended per week. Special fee charged.

**SPN1120 Beginning Spanish I**  
Credit Hours: 4  
Fundamentals of speaking, listening-comprehension, reading, writing, and Hispanic culture. Classroom practice and exercises supplemented by laboratory and/or multi-media designed to develop communicative competence and cultural sensitivity. Student expected to continue further implementation and expansion of their proficiencies in SPN1121 and SPN2220. Students are encouraged to study abroad.

**SPN1121 Beginning Spanish II**  
Credit Hours: 4  
Continuation of SPN 1120. Further development of the basic skills in speaking, listening-comprehension, reading, writing, and appreciation of culture. Classroom practice and exercises supplemented by laboratory and/or multi-media activities designed to develop and enhance communicative competence and cultural sensitivity. Skills and concepts are further polished in SPN2220. Students are encouraged to study abroad.

**SPN1170 Spanish Study Travel**  
Credit Hours: 3  
A course designed for students who wish to combine the study of Spanish with subsequent travel to a Spanish speaking region.

**SPN2201 Intermediate Spanish II**  
Credit Hours: 4  
Emphasis on composition, reading comprehension and conversation. A more in depth review of the history, geography, literature, and current issues of Spain and Spanish America. Students will acquire a greater knowledge of these diverse two cultures and gain more fluency in oral and written communication. This course completes the intermediate level. This course meets the foreign language requirement and it is an International/Intercultural competency course.

**SPN2220 Intermediate Spanish I**  
Credit Hours: 4  
This course is a continuation of SPN1121. The course further develops competencies in listening and reading comprehension, speaking, and writing. Cultural components are embedded through the introduction of complex grammatical and idiomatic structures. Classroom practice and exercises supplemented by laboratory and multimedia activities designed to develop and enhance communicative competence and cultural sensitivity. This course includes compositions and readings in Hispanic prose and poetry. Special fees charged. This course meets the foreign language requirement and is an International/Intercultural competency course.

**SPN2240 Intermediate Spanish Conversation**  
Credit Hours: 3  
Course may be taken in conjunction with SPN2220 or SPN2201 but cannot displace either one of those Courses as a college parallel requirement. The purpose of this course is to permit that student who wishes to increase his comprehension and speaking facility in Spanish to be in a class where the emphasis is totally on the oral approach and where a greater variety of topics will be discussed at a faster pace than the required SPN2201 course would allow.

**SPN2340 Spanish for Spanish Speakers I**  
Credit Hours: 4  
This course is designed for Spanish Speakers who have an oral command of the language but whose knowledge of written and/or formal Spanish is limited or incomplete. Class is conducted entirely in Spanish with emphasis on the improvement of spelling, grammar, vocabulary, reading, writing, and oral skills. Emphasis is placed on the correction of typical errors created by the influence of English. Every unit examines important social and cultural aspects of the Hispanic world. Special fee is charged.
SPN2955 Study Abroad: Advanced Composition & Conversation I  Credit Hours: 3
For students wishing to attain greater proficiency in spoken and written Spanish. Conversation and composition based on selected readings and a variety of contemporary topics. This course is used only in BC Study Abroad Programs.

STA1001 Pathway to Statistics  Credit Hours: 3
STA1001 will lay the foundation for further statistical study. This course introduces basic statistical concepts and focuses on data analysis and quantitative reasoning. This course emphasizes both written and verbal communication of statistical concepts and helps prepare the student for inferential statistics Courses. STA1001 is designed for students who do not intend to major in math, science, computer science, business, etc.

STA2023 Statistics  Credit Hours: 3
A first course in statistical methods including such topics as collecting, grouping, and presenting data; measures of central tendency, position, and variation; theoretical distributions; probability; test of hypotheses; estimation of parameters; and regression and correlation. Use of statistical computer software and/or a scientific calculator (capable of performing 2-variable statistics) will be required. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course is required.

SWS2242C Wetlands Management I  Credit Hours: 3
This course provides the background to define a wetland using indigenous plant forms, aquatic conditions, geology and applicable laws and regulations. The strategies and techniques needed to maintain natural habitats are outlined. Course consists of classroom and fieldwork. Completion of any of the horticultural biology, zoology, or native plant Courses would be helpful and is suggested.

SWS3022 Introduction to Soil Science  Credit Hours: 3
The course will cover the fundamentals of soil science; the physical, chemical and biological properties of soils in relation to plant growth and environmental problems.

SYG2000 Principles of Sociology  Credit Hours: 3
This course is designed to introduce students to the basic terminology, theories, research and topics sociologists study. More specifically, students will be introduced to the relationship between the individual and society; how social structures, such as organizations, family, the mass media, etc., shape views, perceptions, and behaviors; and to society's issues and problems. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

SYG2010 Social Problems  Credit Hours: 3
This course is an examination of the major social problems found in our changing social environment. More specifically, students will be introduced to a variety of topics which may include inequality based on class, race, ethnicity, education, age; violence in society; the changing family; social problems related to gender and sexual behavior; global social problems. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

SYG2230 Contemporary Race & Ethnic Studies  Credit Hours: 3
A study of minority dominant relations with emphasis on ethnic, racial, and religious minorities. This is an International/Intercultural competency course.

SYG2322 Juvenile Delinquency  Credit Hours: 3
A study of juvenile and delinquent behavior and its development which focuses on the social structure of society to find patterns of delinquent activity and its causations.

SYG2323 Introduction to Criminology  Credit Hours: 3
A study of crime and criminal behavior, and its cause and related effects on society, with an emphasis given to criminal theory, and the sociological implications of criminal behavior.
SYG2340 Sociology of Human Sexuality  
Credit Hours: 3  
The Sociology of Human Sexuality is a general review of the scientific principles related to the study of human sexuality. Topics include: the cultural context of sexuality, theoretical perspectives of sexuality, research methods, gender/sex roles, sexual orientation, sexual coercion, sexual anatomy, sexual arousal, pregnancy, STDs/STIs, love and human intimacy, and human sexuality through the life course. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

SYG2421 Marriage & Families: Intercultural Comparison  
Credit Hours: 3  
A study of the institution of the family utilizing historical, cross cultural and sub-cultural comparisons to understand the background evolution and current familiar structures of the world.

SYG2441 Social Institutions  
Credit Hours: 3  
A study of the institutions of pre-industrial, industrial, and post-industrial societies. Special emphasis is on theories of social organization, social change, and the exploration of each institution in world societies.

SYG2905 Independent Study in Sociology  
Credit Hours: 3  
A direct course of study in Sociology. This course will be available to both majors and non-majors who wish to investigate a particular problem. Students will apply for the course and submit an application to the Head of the Behavioral Sciences Department via an instructor with whom he wants to work.

SYG2940 Sociology Field School  
Credit Hours: 1  
This course is designed to provide an on-scene study of sociological topics from the various perspectives provided in a field school setting. Laboratory research and observational techniques are used in providing the learning experiences of this course.

SYG2942 Sociology Field School  
Credit Hours: 3  
This course is designed to provide an on-scene study of sociological topics from the various perspectives provided in a field school setting. Laboratory research and observational techniques are used in providing the learning experiences of this course in domestic and foreign social settings.

TAX2000 Income Tax I  
Credit Hours: 3  
This course covers principles of federal income taxation applicable to individuals. The course is designed for students to acquire the basic knowledge necessary in the preparation of individual tax returns. Sample tax returns will be prepared.

TAX2010 Income Tax II  
Credit Hours: 3  
This course is a continuation of TAX2000 with emphasis on income tax laws applicable to partnerships and corporations. A brief survey of estate and gift taxes will be undertaken. Sample tax returns will be prepared.

THE2000 Theatre Appreciation  
Credit Hours: 3  
A course designed to acquaint the student with the elements of theatre and how they combine and interact to create the live theatre experience. Lecture and discussion will investigate the nature and art of theatre, while the viewing of videotaped and live stage plays will furnish examples of the various dramatic genres, including tragedy, comedy and musical theatre. This is an International/Intercultural competency course.

THE2051L Children's Theatre Production  
Credit Hours: 3  
Participation in the rehearsal and production of the Children's Theatre Program, which continues during the entire term.

THE2052L Children's Theatre Technical  
Credit Hours: 3  
Participation in the technical aspects of the Children's Technical Theatre Program.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>THE2100</td>
<td>Survey of Theatre History</td>
<td>3</td>
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<tr>
<td></td>
<td>A study of Theatre from its beginnings to modern times. This course meets the college's International/Intercultural requirement.</td>
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<tr>
<td>THE2300</td>
<td>Script Analysis</td>
<td>3</td>
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<td></td>
<td>A study of dramatic literature from the time of the early Greeks to recent dramatists in light of the historic, socio-political milieu of the era that promulgates the particular genre. Plays will be analyzed from a dramaturgical point of view. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.</td>
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<tr>
<td>TPA1290</td>
<td>Technical Theatre Laboratory I</td>
<td>1</td>
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<tr>
<td></td>
<td>Participation as technician in the dramatic and musical productions of the college.</td>
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<tr>
<td>TPA1291</td>
<td>Technical Theatre Laboratory II</td>
<td>2</td>
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<tr>
<td></td>
<td>Participation as technician in the Dramatic and Musical productions of the college.</td>
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<tr>
<td>TPA1292</td>
<td>Technical Theatre Laboratory III</td>
<td>3</td>
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<tr>
<td></td>
<td>Participation as technician in the Dramatic and Musical productions of the college.</td>
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<tr>
<td>TPA2000C</td>
<td>Introduction to Theatre Design</td>
<td>3</td>
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<td></td>
<td>An introduction to the techniques, practices, and processes in scenic, lighting, costume, and sound design. The course includes a period styles overview, script analysis, and a survey of appropriate paperwork required by each area.</td>
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<tr>
<td>TPA2192L</td>
<td>Summer Theatre/Technical Production</td>
<td>3</td>
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<td></td>
<td>Participation in the technical aspects of a theatrical production including but not limited to stagecraft, stage management, properties, costuming, wardrobe, lighting, sound, stage makeup and house management.</td>
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<tr>
<td>TPA2200</td>
<td>Stagecraft</td>
<td>3</td>
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<td></td>
<td>An investigation of the principles of stagecraft, lighting, props and set construction.</td>
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<tr>
<td>TPA2220</td>
<td>Introduction to Stage Lighting</td>
<td>3</td>
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<tr>
<td></td>
<td>An historical background of theatrical lighting technology and design and an introduction to the tools and concepts used by the lighting technician from primitive equipment to the modern computer system.</td>
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<tr>
<td>TPA2248</td>
<td>Makeup for Stage &amp; Television</td>
<td>3</td>
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<td>The theoretical and practical application of all types of straight and character make-up for the stage and television.</td>
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<tr>
<td>TPA2900</td>
<td>Directed Independent Student (Capstone)</td>
<td>3</td>
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<td>Individual study by students under the direction of a faculty member. Topics are selected on an individual basis as a Capstone project for technical theatre majors. Hours and levels may vary.</td>
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<tr>
<td>TPP1190L</td>
<td>Performance Laboratory I</td>
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<td></td>
<td>Upon successful completion of this course, students will be able to analyze and create a dramatic character on stage in a theatrical production of the college. For each production, students will learn to understand the genre of the play and adopt appropriate acting styles and techniques. They will learn how to uncover clues in the script which will reveal character objectives and tactics. Additionally, students will create characters through analysis, improvisation, and the development of psychophysical actions grounded in the given circumstances of the play. This information will guide the student actor to make distinct choices regarding the physical and vocal qualities of each character being portrayed.</td>
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<tr>
<td>TPP1191L</td>
<td>Performance Laboratory II</td>
<td>2</td>
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</table>
|             | Upon successful completion of this course, students will be able to analyze and create a dramatic character on stage in a theatrical production of the college. For each production, students will learn to understand the genre of the play and
adopt appropriate acting styles and techniques. They will learn how to uncover clues in the script which will reveal
character objectives and tactics. Additionally, students will create characters through analysis, improvisation, and the development of psychophysical actions grounded in the given circumstances of the play. This information will guide the student actor to make distinct choices regarding the physical and vocal qualities of each character being portrayed.

TPP1192L Performance Laboratory III Credit Hours: 3
Upon successful completion of this course, students will be able to analyze and create a dramatic character on stage in a theatrical production of the college. For each production, students will learn to understand the genre of the play and adopt appropriate acting styles and techniques. They will learn how to uncover clues in the script which will reveal character objectives and tactics. Additionally, students will create characters through analysis, improvisation, and the development of psychophysical actions grounded in the given circumstances of the play. This information will guide the student actor to make distinct choices regarding the physical and vocal qualities of each character being portrayed.

TPP2110C Acting I Credit Hours: 3
Study and development of acting skills concentrating on the student's ability to believe and exist in imaginary circumstances as if they were real, and to transmit those beliefs clearly and artfully to an audience.

TPP2111C Acting II Credit Hours: 3
Building on the foundations established in Acting I, Acting II focuses on a close examination of the dramatic text which becomes the basis for character development and scene work. Students will analyze and perform two scenes and two monologues during the term. Students will learn to use their bodies as artistic instruments with ease and concentration, expressive of the inn and outer life of a given character.

TPP2190L Rehearsal & Performance I Credit Hours: 3
Participation in the audition, rehearsal and performance process of a theatrical stage production.

TPP2260C Performance in Film Credit Hours: 3
Introduction to the various approaches to acting on film and television. A number of genres will be examined including film acting, commercial acting, and various styles of television acting. Students will also learn about Audition techniques for the medium as well as how to prepare for professional employment through studio work and marketing materials.

TPP2500C Movement for the Actor Credit Hours: 3
An academic study and practical application of the principles of stage movement for the actor. Students will expand their range of movement through vocal and physical effort training.

TPP2700C Intro to Voice Credit Hours: 3
An academic study and practical application of the efficient and effective use of the speaking voice, particularly in meeting the special demands of acting for the stage. The theories and principles of the course will be applied in written assignments, oral performances before the class, and through vocal exercises.

TPP2701C Voice & Articulation II Credit Hours: 3
Application of techniques studied in Intro to Voice, with emphasis on the study of vocal posture and the International Phonetic Alphabet. Students will continue to apply differentiation of sounds and adjustment of vocal posture to achieve appropriate dialects for acting assignments. Students will also develop vocal skills needed to embody intention and character in Shakespearean texts. The theories and principles of the course will be applied in written assignments, oral performances before the class, and through vocal exercises done in class.

TPP2900L Directed Independent Study (Capstone) Credit Hours: 3
Individual study in performance under supervision and direction of a Faculty member. Topics selected on an individual basis as a Capstone project for theatre majors.
TSL3080 ESOL Issues & Strategies I
This course is designed to introduce the research-based theories and methodologies along with best practices for teaching ESOL (English for Speakers of Other Languages). The goal of this course is to develop the foundations necessary to prepare pre-service teachers to understand the concepts upon which second language acquisition is developed, and the instructional strategies used to design lesson plans, activities, and assessments appropriate in content area courses. It will examine the role and responsibilities of all stakeholders set forth by the Florida Consent Decree and WIDA standards to develop culturally and linguistically diverse learning environments. 10 school-based field experience hours are required.

TSL4081 ESOL Issues & Strategies II
This course is designed to build on the foundation course in TESOL for students in integrated pre-service teacher education programs. The goal of this course is to link the theory and practice for effective teaching of ESOL students. The course will focus primarily on methods, curriculum and assessment of ESOL students in the areas of language development, and content areas. Effective strategies regarding reading instruction for ELL students will be emphasized.

WOH2040 World in the 20th Century
This course is an examination of the major political, social, economic, intellectual, diplomatic, and military developments and events of the 20th century. It will employ a chronological approach to several major themes which frame the history of the contemporary world: the decline of European hegemony in the course of two major wars and a world depression; the concomitant challenge to western supremacy from Asia; a half-century of superpower hostility following the outbreak of the cold war; and the transformation of global politics in light of the collapse of the U.S.S.R. and the end of the Cold War. This is a writing credit course with International/Intercultural content. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

ZOO2010 General Zoology
Basic course pertaining to the development, anatomy, physiology, genetics, ecology and evolutionary relationships of the animal kingdom. Upon successful completion of this course, the students will be able to comprehend the basic zoological principles and processes of phylogeny, physiology, genetics and ecology.

ZOO2010L General Zoology Laboratory
Upon successful completion of this course, the students should be able to demonstrate a knowledge of the animal kingdom through prescribed activities that focus on the morphology, anatomy, and physiology of selected representative specimens. Laboratory experiments and activities to accompany ZOO2010. Dissection of animals is a component of this course.

ZOO4234 General Parasitology
General Parasitology covers the biology of eukaryotic parasites with emphasis on species of medical and veterinary importance. Students will learn about basic principles and concepts in parasitology and will examine the systematics, morphology, life histories, pathogenesis, epidemiology, and control of parasitic protozoa, flatworms, nematodes, and arthropods. Co-requisite: ZOO4234L. Pre-requisites: BSC2010, BSC2011 (or ZOO2010), or permission of instructor.

ZOO4234L General Parasitology Laboratory
General Parasitology Laboratory is designed to accompany General Parasitology. Students will learn to recognize parasitic protozoa, flatworms, roundworms, and arthropods and be able to describe their morphology. They also learn techniques for the collection and preservation of eukaryotic parasites.

ZOO4713 Comparative Vertebrate Anatomy & Physiology
This course is designed to familiarize the student with morphological and anatomical features of vertebrates from a comparative evolutionary perspective. The course starts with an introduction to the comparative method, including evolutionary concepts such as homology and homoplasy. The underlying biology of tissue-organ systems and evolutionary perspectives on the origin, maintenance, and diversification of form among the vertebrates will be discussed. The remainder of the course will be an overview of major organ systems, interspersed with discussion of
particular vertebrate phenomenon that highlight the development, function and/or evolution of these organ systems.

ZOO4713L Comparative Vertebrate Morphology & Physiology Laboratory Credit Hours: 1
The course is the accompanying laboratory course to ZOO4713. The 3 hours of laboratory per week complements the lecture topics which include evolutionary relationships among the vertebrate groups, and a comparison of major physiological systems; nerve, muscle, respiration, circulation, osmoregulation, excretion, temperature regulation and energy metabolism.