COURSE DESCRIPTIONS
Area: ACC  ACCOUNTING
CCN: *ACG2001  Title: PRINCIPLES OF ACCOUNTING I
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course provides an introductory study of the fundamental principles of recording, summarizing and reporting the financial activities of proprietorships. Advisement note: Students achieving less than a grade of "C" will not be allowed to continue to ACG2011, Principles of Accounting II. A grade of less than "C" is not transferable to upper division.

CCN: *ACG2011  Title: PRINCIPLES OF ACCOUNTING II
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Advisement note: Students achieving less than a grade of C will not be allowed to continue on to ACG2071, Managerial Accounting. A grade of less than a C is not transferable to upper division.

CCN: *ACG2071  Title: MANAGERIAL ACCOUNTING
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Advisement note: Students achieving less than a grade of "C" may experience academic difficulty in higher level accounting courses. A grade of less than C is not transferable to upper division.

CCN: *ACG2100  Title: INTERMEDIATE ACCOUNTING I
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Advisement Note: Students achieving less than a grade of "C" in ACG2011, Principles of Accounting II, may experience academic difficulty in this course.
CCN: *ACG2110   Title: INTERMEDIATE ACCOUNTING II  
Credit Hrs:   3.00 
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00  
Other: 0.00   Fees: 0.00  
Description: 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. Advisement Note: Students achieving less than a grade of "C" in ACG2100, Intermediate Accounting I, may experience academic difficulty in the course. Offered Term I, Central Campus.

CCN: *ACG2450C  Title: COMPUTERIZED ACCOUNTING APPLICATIONS  
Credit Hrs:   3.00  
Total Contact Hrs: 48.00   Lecture: 12.00   Lab: 36.00   Clinical: 0.00  
Other: 0.00   Fees: 8.00  
Description: 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.

Area: COE  COOPERATIVE EDUCATION

CCN: *ACG2949   Title: CO OP WORK EXPERIENCE  
Credit Hrs:   3.00  
Total Contact Hrs: 144.00   Lecture: 0.00   Lab: 0.00   Clinical: 0.00  
Other: 144.00   Fees: 0.00  
Description: A course designed to provide training in a students field of study through work experience. Students are graded on the basis of learning objectives and employer evaluations. Course may be repeated three times. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain the registration approval.

Area: AUT  AUTOMOTIVE TECHNOLOGY

CCN: *AER1070C  Title: DEALER POLICY AND PROCEDURES  
Credit Hrs:   2.00  
Total Contact Hrs: 36.00   Lecture: 24.00   Lab: 12.00   Clinical: 0.00  
Other: 0.00   Fees: 0.00  
Description: Course designed to expose the student to back office operations, policy, procedures, and protocol.

CCN: *AER1081C  Title: INTRODUCTION TO AUTOMOTIVE TECH.  
Credit Hrs:   4.00  
Total Contact Hrs: 96.00   Lecture: 48.00   Lab: 48.00   Clinical: 0.00  
Other: 0.00   Fees: 53.75  
Description: 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.

CCN: *AER1198C  Title: AUTOMOTIVE ENGINE REPAIR
Credit Hrs:  4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 43.75
Description: 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.

CCN: *AER1695C  Title: AUTOMOTIVE ELECTRONICS
Credit Hrs:  4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 37.75
Description: A course designed to teach the fundamental principles of electronics and to introduce the application of electronics in the modern automobile.

CCN: *AER1698C  Title: ELECTRICAL SYSTEMS
Credit Hrs:  4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 59.75
Description: 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.

CCN: *AER2070C  Title: AUTOMOTIVE SERVICE CONSULTANT
Credit Hrs:  3.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *AER2298C  Title: AUTOMATIC TRANSMISSIONS AND TRANSAXLES
Credit Hrs: 4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 72.75
Description: 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.

CCN: *AER2398C  Title: MANUAL DRIVE TRAIN AND AXLES
Credit Hrs: 4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 31.75
Description: 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.

CCN: *AER2498C  Title: STEERING AND SUSPENSION SYSTEMS
Credit Hrs: 4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 41.75
Description: 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.

CCN: *AER2598C  Title: BRAKE SYSTEMS AND CHASSIS REPAIR
Credit Hrs: 4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 29.75
Description: 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.
CCN: AER2758C  Title: HEATING AND AIR CONDITIONING THEORY
Credit Hrs: 4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 36.75
Description: 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.

CCN: AER2895C  Title: ADVANCED ENGINE PERFORMANCE
Credit Hrs: 4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 45.75
Description: 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.

CCN: AER2898C  Title: ENGINE PERFORMANCE
Credit Hrs: 4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 41.75
Description: A course designed to teach the principles and procedures of engine tune up and repair, and emission control systems.

Area: COE  COOPERATIVE EDUCATION
CCN: AER2948  Title: CO-OP WORK EXPERIENCE INTRODUCTION
Credit Hrs: 3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 4.75
Description: 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 32-40 hours in a supervised program at the dealership.

CCN: AER2949  Title: CO OP WORK EXPERIENCE
Credit Hrs: 3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 4.75
Description: 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.

Area: MIS  MILITARY SCIENCE
CCN: AFR1101  Title: FIRST YEAR AIR FORCE ROTC. (A)
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 16.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This is a survey course designed to introduce students to the U.S. Air Force Reserve Officer Training Corps. Featured topics include:
officership 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)

CCN: *AFR1111 Title: FIRST YEAR AIR FORCE ROTC (B)
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 16.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: AFR1111 is a 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).

CCN: *AFR2130 Title: SECOND YEAR AIR FORCE ROTC (A)
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 16.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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).

CCN: *AFR2131 Title: SECOND YEAR AIR FORCE ROTC (B)
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 16.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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 and 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).

Area: BIO BIOLOGY
CCN: *ALS4162 Title: CONSEQUENCES OF BIOLOGICAL INVASION
Credit Hrs: 3.00
Description: 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.

Area: AGR  AGRICULTURE  
CCN: *ALS4163   Title: CHALLENGES IN PLANT RESOURCE PROTECTION  
Credit Hrs: 3.00

Description: This course will provide students with applied training in the regulatory aspects of plant protection, using real-world case studies, scenarios and issues.

Area: HIS  GENERAL HISTORY  
CCN: *AMH2010   Title: HISTORY OF THE UNITED STATES TO 1877  
Credit Hrs: 3.00

Description: 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 Native America, the European colonial period, the American Revolution, the Early Republic, the rise of American Nationalism and Identity, 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. AMH2010 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

CCN: *AMH2020   Title: HISTORY OF THE UNITED STATES SINCE 1877  
Credit Hrs: 3.00

Description: 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. This course will focus on a myriad of themes including but not limited to: the basic principles and practices of American democracy, the United States Constitution and its application, landmark Supreme Court cases, landmark legislation, and landmark executive actions that have had an impact on the shaping of modern-day America. Special emphasis will also be 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. AMH2020 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

CCN: *AMH2035   Title: UNITED STATES HISTORY: 1945 TO THE PRESENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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, & 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.

CCN: *AMH2091   Title: SURVEY OF AFRICAN AMERICAN HISTORY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This a survey course of African American History which provides students with a general history of the political, economic, cultural, and social development of American society with a special emphasis on the African Americans contribution in those areas. Subjects include 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. AMH2091 is a writing credit course. Students must earn a minimum grade of C to meet requirements of the Gordon Rule for writing. AMH2091 meets the International/Intercultural competency requirement.

Area: LIT  LITERATURE
CCN: *AML2010   Title: AMERICAN LITERATURE: COLONIAL TO 1900
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. AML2010 is a writing credit course. Students must earn a minimum grade
of C to meet the requirements of the Gordon Rule for writing. AML2010 meets the International/Intercultural competency requirement.

CCN: *AML2020   Title: AMERICAN LITERATURE 1900-PRESENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. AML2020 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. AML2020 meets the International/Intercultural competency requirement.

CCN: *AML2600   Title: AFRICAN AMERICAN LITERATURE
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. AML2600 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. AML2600 meets the International/Intercultural competency requirement.

CCN: *AML2631   Title: US HISPANIC/LATINO LITERATURE
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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 Vaca, Hernando De Soto, Jose Marti, William Carlos Williams, Santiago Baca, Tato Laviera, Sandra Cisneros, Rudolfo Anaya, Gloria Anzaldua, Reinaldo Arenas, Richard Blanco, Jennine Capo Crucet, Elizabeth Acevedo, among others. AML2631 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. AML2631 meets the International/Intercultural competency requirement.
Area: ATM AVIATION MAINTENANCE TECH
CCN: *AMT1001C Title: BASIC ELECTRICITY
Credit Hrs: 2.00
Total Contact Hrs: 89.25  Lecture: 42.25  Lab: 47.00  Clinical: 0.00
Other: 0.00  Fees: 31.00
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe and/or powerplant rating.

CCN: *AMT1011C Title: AIRCRAFT DRAWINGS
Credit Hrs: 1.00
Total Contact Hrs: 21.00  Lecture: 12.00  Lab: 9.00  Clinical: 0.00
Other: 0.00  Fees: 12.00
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe and/or powerplant rating.

CCN: *AMT1021C Title: WEIGHT AND BALANCE
Credit Hrs: 1.00
Total Contact Hrs: 33.00  Lecture: 20.50  Lab: 12.50  Clinical: 0.00
Other: 0.00  Fees: 17.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe and/or powerplant rating.

CCN: *AMT1031C Title: FLUID LINES AND FITTINGS
Credit Hrs: 1.00
Total Contact Hrs: 26.25  Lecture: 10.00  Lab: 16.25  Clinical: 0.00
Other: 0.00  Fees: 48.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe
and/or powerplant rating.

CCN: *AMT1041C  Title: MATERIALS AND PROCESSES
Credit Hrs: 2.00
Total Contact Hrs: 84.00  Lecture: 46.00  Lab: 38.00  Clinical: 0.00
Other: 0.00  Fees: 23.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe and/or powerplant rating.

CCN: *AMT1050C  Title: GROUND OPERATIONS AND SERVICING
Credit Hrs: 1.00
Total Contact Hrs: 31.50  Lecture: 10.50  Lab: 21.00  Clinical: 0.00
Other: 0.00  Fees: 18.75
Description: Familiarizes the student with the proper methods of starting ground operating servicing and securing aircraft. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe and/or powerplant rating.

CCN: *AMT1060C  Title: CLEANING AND CORROSION CONTROL
Credit Hrs: 1.00
Total Contact Hrs: 26.25  Lecture: 12.00  Lab: 14.25  Clinical: 0.00
Other: 0.00  Fees: 20.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe and/or powerplant rating.

CCN: *AMT1070C  Title: APPLIED MATHEMATICS
Credit Hrs: 1.00
Total Contact Hrs: 21.00  Lecture: 14.00  Lab: 7.00  Clinical: 0.00
Other: 0.00  Fees: 12.00
Description: Reviews principles of mathematical functions and studies their application to aircraft and powerplant maintenance operations. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe and/or powerplant rating.

CCN: *AMT1081C  Title: FAR'S FORMS & PRIVILEGES
Credit Hrs: 1.00
Total Contact Hrs: 42.00  Lecture: 22.00  Lab: 20.00  Clinical: 0.00
Other: 0.00  Fees: 19.00
Description: 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. This course is required by the Federal
Aviation Administration under 14 CFR Part 147 for
those pursuing a mechanic certificate with an
airframe and/or powerplant rating.

CCN: *AMT1090C  Title: BASIC PHYSICS
Credit Hrs: 1.00
Total Contact Hrs: 26.25  Lecture: 17.00  Lab: 9.25  Clinical: 0.00
Other: 0.00  Fees: 12.00
Description: Provides an understanding of energy and matter
and how their relationships apply to aircraft maintenance. This course is required by the
Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate
with an airframe and/or powerplant rating.

CCN: *AMT1111C  Title: AIRCRAFT WOOD STRUCTURES
Credit Hrs: 1.00
Total Contact Hrs: 11.00  Lecture: 9.00  Lab: 2.00  Clinical: 0.00
Other: 0.00  Fees: 16.75
Description: 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. This course is required by the Federal
Aviation Administration under 14 CFR Part 147 for
those pursuing a mechanic certificate with an
airframe rating.

CCN: *AMT1116C  Title: AIRCRAFT COVERINGS
Credit Hrs: 1.00
Total Contact Hrs: 12.00  Lecture: 8.00  Lab: 4.00  Clinical: 0.00
Other: 0.00  Fees: 16.75
Description: Students 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. This course is required by the Federal
Aviation Administration under 14 CFR Part 147 for
those pursuing a mechanic certificate with an
airframe rating.

CCN: *AMT1127C  Title: AIRCRAFT FINISHES
Credit Hrs: 1.00
Total Contact Hrs: 30.00  Lecture: 10.00  Lab: 20.00  Clinical: 0.00
Other: 0.00  Fees: 48.75
Description: 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.
This course is required by the Federal Aviation
Administration under 14 CFR Part 147 for those
pursuing a mechanic certificate with an airframe
rating.
CCN: *AMT1131C  Title: SHEETMETAL & NON-METALLIC STRUCTURES
Credit Hrs:  4.00
Total Contact Hrs: 157.00  Lecture: 41.00  Lab: 116.00  Clinical: 0.00
Other: 0.00  Fees: 112.75
Description: The 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, composites and other types of non-metallic structural material and methods of construction using these materials. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.

CCN: *AMT1141C  Title: AIRCRAFT WELDING
Credit Hrs:  1.00
Total Contact Hrs: 40.00  Lecture: 15.00  Lab: 25.00  Clinical: 0.00
Other: 0.00  Fees: 109.75
Description: 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 heli-arc welding. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.

CCN: *AMT1156C  Title: ASSEMBLY & RIGGING
Credit Hrs:  2.00
Total Contact Hrs: 65.00  Lecture: 20.00  Lab: 45.00  Clinical: 0.00
Other: 0.00  Fees: 22.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: *AMT1161C  Title: AIRFRAME INSPECTION
Credit Hrs:  1.00
Total Contact Hrs: 20.00  Lecture: 5.00  Lab: 15.00  Clinical: 0.00
Other: 0.00  Fees: 26.75
Description: 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 airworthiness directives, classifying repairs, and pinpointing specific service problems. The student will complete the required maintenance forms, records, and inspection reports required by Federal Aviation Regulations. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.

CCN: *AMT1201C  Title: AIRCRAFT LANDING GEAR SYSTEMS
Credit Hrs:  2.00
Total Contact Hrs: 85.00   Lecture: 35.00   Lab: 50.00   Clinical: 0.00  
Other: 0.00   Fees: 38.75  
Description: Students 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 of retractable landing gear systems will be covered in detail. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.  
CCN: *AMT1211C  Title: HYDRAULIC AND PNEUMATIC SYSTEMS  
Credit Hrs: 2.00  
Total Contact Hrs: 75.00   Lecture: 35.00   Lab: 40.00   Clinical: 0.00  
Other: 0.00   Fees: 62.75  
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.  
CCN: *AMT1221C  Title: CABIN ATMOSPHERE CONTROL SYSTEMS  
Credit Hrs: 1.00  
Total Contact Hrs: 50.00   Lecture: 20.00   Lab: 30.00   Clinical: 0.00  
Other: 0.00   Fees: 17.75  
Description: This course 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.  
CCN: AMT1231C   Title: AVIONICS INSTALLATION AND TROUBLESHOOTING I  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00   Lecture: 16.00   Lab: 32.00   Clinical: 0.00  
Other: 0.00   Fees: 26.00  
Description: 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 three of the FCC general radiotelephone operator's license (GRPL) examination.  
CCN: *AMT1232C  Title: AIRCRAFT INSTRUMENT SYSTEMS  
Credit Hrs: 1.00
Total Contact Hrs: 25.00   Lecture: 15.00   Lab: 10.00   Clinical: 0.00
Other: 0.00    Fees: 17.75
Description: This course provides a basic familiarization of aircraft instruments and their function to include removal, installation, and the installed testing of such instruments. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.
CCN: *AMT1241C  Title: COMMUNICATION & NAVIGATION SYSTEMS
Credit Hrs: 1.00
Total Contact Hrs: 30.00   Lecture: 25.00   Lab: 5.00    Clinical: 0.00
Other: 0.00    Fees: 16.75
Description: This course introduces the student with basic auto pilot operation and the installation requirements and use of the various communication and navigation systems of an aircraft. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.
CCN: *AMT1251C  Title: AIRCRAFT FUEL SYSTEMS
Credit Hrs: 1.00
Total Contact Hrs: 40.00   Lecture: 17.00   Lab: 23.00   Clinical: 0.00
Other: 0.00    Fees: 23.75
Description: The student is provided with the knowledge and skills needed to maintain fuel systems and fuel system components. The student will be able to inspect, check, maintain, and repair aircraft fuel system and repair aircraft fuel system components, fuel dump systems, fuel management and transfer systems, and perform refueling.
CCN: *AMT1261C  Title: AVIONICS LINE MAINTENANCE FUNDAMENTALS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 16.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 26.00
Description: 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.
CCN: *AMT1263C  Title: AIRCRAFT ELECTRICAL SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 100.00   Lecture: 45.00   Lab: 55.00   Clinical: 0.00
Other: 0.00    Fees: 47.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.

CCN: *AMT1271C  Title: POSITION AND WARNING SYSTEMS
Credit Hrs: 1.00
Total Contact Hrs: 30.00  Lecture: 10.00  Lab: 20.00  Clinical: 0.00
Other: 0.00  Fees: 16.75
Description: This course presents the student with the inspection, servicing and maintaining of position and warning systems. Included in the area are navigation lights, beacons, and lights indicating the position of various aircraft components. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.

CCN: *AMT1286C  Title: ICE, RAIN, & FIRE PROTECTION
Credit Hrs: 1.00
Total Contact Hrs: 30.00  Lecture: 10.00  Lab: 20.00  Clinical: 0.00
Other: 0.00  Fees: 16.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with an airframe rating.

CCN: *AMT1313C  Title: TURBINE ENGINES
Credit Hrs: 4.00
Total Contact Hrs: 147.00  Lecture: 50.00  Lab: 97.00  Clinical: 0.00
Other: 0.00  Fees: 126.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: *AMT1321C  Title: ENGINE INSPECTION
Credit Hrs: 1.00
Total Contact Hrs: 32.50  Lecture: 10.00  Lab: 22.50  Clinical: 0.00
Other: 0.00  Fees: 18.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: AMT2233C   Title: AVIONICS INSTALLATION AND TROUBLESHOOTING II
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 16.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 98.00

Description: This course is a continuation of Avionics Installation and Troubleshooting I. Students will explore more complex avionics installations projects. 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. Students will take the Element 3 of the FCC General Radiotelephone Operator's License (GRPL) examination.

CCN: AMT2262C   Title: AVIONICS LINE MAINTENANCE OPERATIONS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 24.00   Lab: 24.00   Clinical: 0.00
Other: 0.00    Fees: 26.00

Description: 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.

CCN: *AMT2301C  Title: RECIPROCATING ENGINES
Credit Hrs:   5.00
Total Contact Hrs: 152.25  Lecture: 45.00   Lab: 107.25  Clinical: 0.00
Other: 0.00    Fees: 98.75

Description: 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. This course is required
by the Federal Aviation Administration under 14
CFR Part 147 for those pursuing a mechanic
certificate with a powerplant rating.

CCN: *AMT2401C  Title: ENGINE INSTRUMENT SYSTEMS
Credit Hrs:  1.00
Total Contact Hrs: 31.50  Lecture: 12.00  Lab: 19.50  Clinical: 0.00
Other: 0.00   Fees: 17.75
Description: Students will have a knowledge of operation,
installation, making and interpretation of
powerplant 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 manufacture's
recommendations. This course will provide
experience in inspection checking, servicing,
troubleshooting, and repair of engine instrument
systems that are electrical in nature. This course
is required by the Federal Aviation Administration
under 14 CFR Part 147 for those pursuing a
mechanic certificate with a powerplant rating.

CCN: *AMT2411C  Title: ENGINE FIRE PROTECTION SYSTEMS
Credit Hrs:  1.00
Total Contact Hrs: 15.75 Lecture: 5.75  Lab: 10.00  Clinical: 0.00
Other: 0.00   Fees: 17.75
Description: This course is designed 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. This course is required by
the Federal Aviation Administration under 14 CFR
Part 147 for those pursuing a mechanic certificate
with a powerplant rating.

CCN: *AMT2421C  Title: ENGINE ELECTRICAL SYSTEMS & APUS
Credit Hrs:  2.00
Total Contact Hrs: 69.25  Lecture: 31.00  Lab: 38.25  Clinical: 0.00
Other: 0.00   Fees: 51.75
Description: 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. This course
is required by the Federal Aviation Administration
Administration under 14 CFR Part 147 for those
pursuing a mechanic certificate with a
powerplant rating.

CCN: *AMT2436C  Title: LUBRICATION SYSTEMS
Credit Hrs:  1.00
Total Contact Hrs: 42.00  Lecture: 16.00  Lab: 26.00  Clinical: 0.00
Other: 0.00   Fees: 22.75
Description: Provides a comprehensive knowledge of the purpose
and function of lubricants and lubrication systems
for powerplants. Gives experience in identifying and selecting lubricants, as well as, inspecting, checking, servicing and troubleshooting repair of the system and components. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: *AMT2441C  Title: IGNITION & STARTING SYSTEMS
Credit Hrs:  2.00
Total Contact Hrs: 84.00  Lecture: 37.00  Lab: 47.00  Clinical: 0.00
Other:  0.00  Fees: 48.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: *AMT2452C  Title: ENGINE FUEL SYSTEMS
Credit Hrs:  1.00
Total Contact Hrs: 21.00  Lecture: 8.50  Lab: 12.50  Clinical: 0.00
Other:  0.00  Fees: 59.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: *AMT2453C  Title: FUEL METERING SYSTEMS
Credit Hrs:  2.00
Total Contact Hrs: 63.00  Lecture: 26.50  Lab: 36.50  Clinical: 0.00
Other:  0.00  Fees: 20.75
Description: 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, filters, and strainers are discussed and practical experience is gained in these areas. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: *AMT2461C  Title: INDUCTION & ENGINE AIRFLOW SYSTEMS
Credit Hrs:  1.00
Total Contact Hrs: 26.25  Lecture: 11.50  Lab: 14.75  Clinical: 0.00
Other:  0.00  Fees: 18.75
Description: 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. This course is required by the Federal Aviation Administration
under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: *AMT2471C  Title: ENGINE COOLING & EXHAUST
Credit Hrs:  1.00
Total Contact Hrs: 26.25  Lecture: 11.25  Lab: 15.00  Clinical: 0.00
Other: 0.00  Fees: 18.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

CCN: *AMT2491C  Title: PROPELLERS AND UNDUCTED FANS
Credit Hrs:  2.00
Total Contact Hrs: 89.25  Lecture: 41.00  Lab: 48.25  Clinical: 0.00
Other: 0.00  Fees: 32.75
Description: 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. This course is required by the Federal Aviation Administration under 14 CFR Part 147 for those pursuing a mechanic certificate with a powerplant rating.

Area: ANT  ANTHROPOLOGY
CCN: *ANT2000  Title: INTRODUCTION TO ANTHROPOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. ANT2000 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ANT2000 meets the International/Intercultural competency requirement.

CCN: *ANT2140  Title: INTRO TO ARCHAEOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. ANT2140 is a writing
credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ANT2140 meets the International/Intercultural competency requirement.

CCN: *ANT2211  Title: INTRODUCTION TO WORLD ETHNOLOGY PEOPLES OF THE
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A survey of cultures on differing levels of development, focusing upon subsistence, social organization, religion, art, and culture change. ANT2211 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ANT2211 meets the International/Intercultural competency requirement.

CCN: *ANT2381  Title: CULTURE AND SOCIETY OF SPAIN
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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).

CCN: *ANT2825  Title: ANTHROPOLOGY FIELD SCHOOL
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This lab course is designed to supplement various topics relative to physical and cultural Anthropology as well as Archaeology. Study is limited to field projects.

CCN: *ANT2905  Title: INDEPENDENT STUDY ANTHROPOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 wants to work. Prerequisite: Instructor's approval.

Area: ACC ACCOUNTING
CCN: *APA1111C  Title: INTRODUCTION TO ACCOUNTING
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 36.00  Lab: 12.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: ARC ARCHITECTURAL TECHNOLOGY
CCN: *ARC1056C Title: DIGITAL MEDIA: VIRTUAL BUILDING MODELING
Credit Hrs: 2.00
Total Contact Hrs: 48.00 Lecture: 16.00 Lab: 32.00 Clinical: 0.00 Other: 0.00 Fees: 18.00
Description: Course provides working knowledge of current computer aided design software related to architecture and building construction. Lab 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.

CCN: *ARC1126C Title: ARCHITECTURAL DRAWING
Credit Hrs: 4.00
Total Contact Hrs: 64.00 Lecture: 16.00 Lab: 48.00 Clinical: 0.00 Other: 0.00 Fees: 18.00
Description: 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.

CCN: *ARC1301C Title: ARCHITECTURAL DESIGN I
Credit Hrs: 4.00
Total Contact Hrs: 96.00 Lecture: 32.00 Lab: 64.00 Clinical: 0.00 Other: 0.00 Fees: 18.00
Description: 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.

CCN: *ARC1302C Title: ARCHITECTURAL DESIGN II
Credit Hrs: 4.00
Total Contact Hrs: 96.00 Lecture: 32.00 Lab: 64.00 Clinical: 0.00 Other: 0.00 Fees: 18.00
Description: 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.

CCN: *ARC1701 Title: SURVEY OF ARCHITECTURAL HISTORY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00 Other: 0.00 Fees: 0.00
Description: A general introduction to the social, political,
economic, technological and cultural factors which have generated architecture from prehistoric times through the Fifteenth Century. ARC1701 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ARC1701 meets the International/Intercultural competency requirement.

CCN: *ARC2201 Title: THEORY OF ARCHITECTURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Description: This course introduces architectural theory and defines 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. ARC2201 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ARC2201 meets the International/Intercultural competency requirement.

CCN: *ARC2303C Title: ARCHITECTURAL DESIGN III
Credit Hrs: 4.00
Total Contact Hrs: 112.00 Lecture: 16.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *ARC2304C Title: ARCHITECTURAL DESIGN IV
Credit Hrs: 4.00
Total Contact Hrs: 112.00 Lecture: 16.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *ARC2461 Title: MATERIALS AND METHODS OF CONSTRUCTION
Credit Hrs: 4.00
Total Contact Hrs: 64.00 Lecture: 64.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *ARC2580  Title: ARCHITECTURAL STRUCTURES
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

Area: ART  ART, FINE AND APPLIED
CCN: *ARH2000  Title: ART APPRECIATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: Art Appreciation is a course for non-art majors that introduces a chronological history of art from prehistory to the present. Particular emphasis is placed on understanding painting, sculpture, and architecture through the context of their respective historical periods. ARH2000 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ARH2000 meets the International/Intercultural competency requirement.

CCN: *ARH2050  Title: WORLD ART HISTORY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: World Art History is a broad chronological survey and critical study of world art and architecture from prehistory through the Medieval period. ARH2050 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ARH2050 meets the International/Intercultural competency requirement.

CCN: *ARH2051  Title: ART HISTORY: RENAISSANCE TO MODERN
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: Art History: Renaissance to Modern is a broad chronological survey and critical study of art and architecture from the Renaissance to the Modern period. ARH2051 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ARH2051 meets the International/Intercultural competency requirement.

CCN: *ARH2351  Title: SPANISH ART HISTORY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *ART1201C  Title: 2 D DESIGN
Credit Hrs: 3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Two-dimensional study of form, principles of organization, and the elements of design fundamental for creative work in 2-D visual arts.

CCN: *ART1203C  Title: 3D DESIGN
Credit Hrs: 3.00
Total Contact Hrs: 102.00  Lecture: 6.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: The Three-dimensional study of Form: The Elements of Art, Principles of Organization, Materials, Tools and Techniques, and the Creative Design Process in theory and practice to create three dimensional art forms.

CCN: *ART1300C  Title: DRAWING I
Credit Hrs: 3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Still life, landscape, and other compositions utilizing a variety of media emphasizing elements and materials of representational drawing from observation.

CCN: *ART1301C  Title: INTERMEDIATE DRAWING
Credit Hrs: 3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *ART1430C  Title: BEGINNING SILKSCREEN
Credit Hrs: 3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 4.00
Description: 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.

CCN: *ART1600C  Title: COMPUTER ART
Credit Hrs: 3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 71.00
Description: 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.

CCN: *ART2205C  Title: COLOR THEORY  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00  
Other:  0.00  Fees:  0.00  
Description: A basic course in the exploration of color theories, color systems, and color relativity in regard to optical sensation, lighting variation and psychological impact.

CCN: *ART2330C  Title: LIFE DRAWING  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00  
Other:  0.00  Fees: 83.00  
Description: Study of human anatomy for artists, utilizing techniques of visual representations from direct observation of clothed and unclothed models.

CCN: *ART2400C  Title: BEGINNING PRINTMAKING  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00  
Other:  0.00  Fees: 85.00  
Description: A study of the processes and techniques in intaglio, polymer light-sensitive and relief printmaking.

CCN: *ART2500C  Title: PAINTING I  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00  
Other:  0.00  Fees:  0.00  
Description: An introduction to creative techniques and composition applied various media.

CCN: *ART2501C  Title: PAINTING II  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00  
Other:  0.00  Fees:  0.00  
Description: A creative exploration of oil, acrylic techniques and/or water media with an emphasis on composition.

CCN: *ART2540C  Title: WATERCOLOR  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00  
Other:  0.00  Fees:  0.00  
Description: A creative exploration of watercolor techniques and media with an emphasis on composition.

CCN: *ART2623C  Title: 3D COMPUTER MODELING FOR ANIMATION  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00  Lecture: 32.00  Lab: 64.00  Clinical: 0.00  
Other:  0.00  Fees:  0.00  
Description: 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.

CCN: *ART2701C  Title: SCULPTURE  
Credit Hrs:  3.00
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Prerequisite: Instructor permission.
CCN: *ART2750C  Title: CERAMICS I
Credit Hrs: 3.00
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00
Other: 0.00   Fees: 85.00
Description: Study of basic ceramic shaping techniques, glazing, decorating and firing.
CCN: *ART2751C  Title: CERAMICS II
Credit Hrs: 3.00
Total Contact Hrs: 96.00   Lecture: 32.00   Lab: 64.00   Clinical: 0.00
Other: 0.00   Fees: 64.00
Description: A study of advanced techniques in ceramics synthesizing basic skills with more advanced concepts and techniques of forming clay, surface decoration, glazing and firing.
CCN: *ART2752C  Title: CERAMICS: THROWING ON THE POTTERS WHEEL
Credit Hrs: 3.00
Total Contact Hrs: 96.00   Lecture: 32.00   Lab: 64.00   Clinical: 0.00
Other: 0.00   Fees: 91.00
Description: A fine arts study of advanced techniques in ceramics emphasizing concepts and techniques of forming clay on the wheel, surface decoration, glazing and firing.
CCN: *ART2754C  Title: CERAMICS: HAND-BUILDING
Credit Hrs: 3.00
Total Contact Hrs: 96.00   Lecture: 32.00   Lab: 64.00   Clinical: 0.00
Other: 0.00   Fees: 91.00
Description: 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.
CCN: *ART2778  Title: CERAMIC SPECIALTIES
Credit Hrs: 3.00
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continued investigation of personal expression through ceramic techniques. Application to do work in special problems must be made to instructor who is to direct the study. A design of the study must be presented to the instructor and approved.
CCN: *ART2905  Title: INDEPENDENT STUDY
Credit Hrs: 3.00
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Exceptions to prerequisite may be considered by the Art Department Head.

CCN: *ART2906L Title: INDEPENDENT STUDY: CERAMICS
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 0.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 27.00
Description: A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the ceramics process.

CCN: *ART2907 Title: INDEPENDENT STUDY: DRAWING
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 0.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the drawing process. Instructor's approval required.

CCN: *ART2908L Title: INDEPENDENT STUDY: SCULPTURE
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 0.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 27.00
Description: A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the sculpture process.

CCN: *ART2909 Title: INDEPENDENT STUDY: PAINTING
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 0.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the painting process.

CCN: *ART2931C Title: ART SPECIAL TOPICS
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 32.00 Lab: 64.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. Instructor's permission required.

CCN: *ART2932C Title: SPECIAL TOPIC: CERAMICS
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 0.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 27.00
Description: A ceramics studio course centered around topics of current interest or special interest to students. Topics or focus may vary from semester to semester. Exception to prerequisites will be considered by the Art Department Head. Special topics credit hours are not automatically transferable. Transfer credit is the prerogative
Area: COE  COOPERATIVE EDUCATION
CCN: *ART2949  Title: CO OP WORK EXPERIENCE
Credit Hrs:  3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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.

Area: ART  ART, FINE AND APPLIED
CCN: *ART2950  Title: SEMINAR IN ART
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *ART2954C  Title: PORTFOLIO PREPARATION AND EXHIBITION
Credit Hrs:  3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 "capstone" 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 "Statement of Intent" is prepared to accompany the portfolio.

Area: ATT  AVIATION TECHNOLOGY
CCN: *ASC1010  Title: HISTORY OF AVIATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *ASC1100  Title: NAVIGATIONAL SCIENCE I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course, together with ATT1100, provides the basic aeronautical knowledge for the professional pilot and aviation operation programs. The two courses must be taken concurrently unless the student's major is Airport Operations Management or Aviation Maintenance Management, in which only ATT1100 is required. The areas of study include airport operations, airspace, flight information publications, basic air navigation including pertinent regulations, preflight planning, cross country navigation, and radio navigation. Successful completion of ATT1100 and ASC1100 will prepare students for the FAA Private Pilot (airplane) Computerized Knowledge Exam.

CCN: *ASC1210   Title: AVIATION WEATHER
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Prerequisite: private pilot's license or instructor's permission.

CCN: *ASC1550   Title: AERODYNAMICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *ASC1610   Title: AIRCRAFT ENGINES, STRUCTURES, AND SYSTEMS
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *ASC2110   Title: NAVIGATION SCIENCE II
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Methods and procedures for the solution of advanced pilotage and dead reckoning problems. Functioning, capabilities, and limitations of radio navigation systems. Prerequisite: private pilot's license or instructor's permission.

CCN: *ASC2320   Title: AVIATION LAW AND REGULATIONS
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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, CFR 1520, 1540, 1520, and 1544 and NTSB 830. These topics will include navigable airspace, airport noise and the applicable Advisory Circulars (AC) that explain compliance. Additionally, topics of discussion will include an overview of how the regulations are governed and administered, compliance with regulations, non-compliance, and management of government regulations.

CCN: *ASC2870   Title: AVIATION SAFETY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 be studied.

Area: COE   COOPERATIVE EDUCATION
CCN: *ASC2949   Title: CO OP WORK EXPERIENCE
Credit Hrs: 3.00
Total Contact Hrs: 144.00   Lecture: 0.00   Lab: 0.00   Clinical: 0.00
Other: 144.00   Fees: 0.00
Description: 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. All students must contact the Co-operative Education Office to obtain registration approval.

Area: AVM   AVIATION
CCN: *ASC3215   Title: ADVANCED AVIATION WEATHER
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *ASC3321   Title: ADVANCED AVIATION LAW  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  
Other: 0.00  
Description: 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.

CCN: *ASC3478   Title: ADVANCED HUMAN FACTORS I  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  
Other: 0.00  
Description: 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.

CCN: *ASC4200   Title: ADVANCED FLIGHT PLANNING FOR T.C. AIRCRAFT  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  
Other: 0.00  
Description: Flight planning for transport category aircraft is covered including weight and balance, aircraft instrumentation and performance, the use of airline manuals, fuel calculations and route planning.

CCN: *ASC4476   Title: ADVANCED HUMAN FACTORS II  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  
Other: 0.00  
Description: A continuation of Advanced Human Factors I, covers crew briefing, task management, use of checklists, safety briefings, and passenger conflict management.

CCN: *ASC4551   Title: ADVANCED HIGH ALTITUDE AERODYNAMICS  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  
Other: 0.00  
Description: Description pending proposal

CCN: *ASC4671   Title: TRANSPORT CATEGORY AIRCRAFT OPERATIONS  
Credit Hrs: 5.00  
Total Contact Hrs: 80.00  
Other: 0.00  
Description: A combination classroom and hands-on class covering the operations of Transport Category (TC) aircraft systems technology including advanced navigational equipment. Emphasis is placed on interpreting the systems output including the computer interfaces between components.

Area: ASL AMERICAN SIGN LANGUAGE
CCN: *ASL1140   Title: AMERICAN SIGN LANGUAGE I  
Credit Hrs: 4.00  
Total Contact Hrs: 64.00  
Other: 0.00  
Description: 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. (This course is designed for students who have never taken a course in American Sign Language. Students should check individual university program requirements for transferability.) ASL1140 meets the foreign language and the International/Intercultural competency requirements.

CCN: *ASL1150   Title: AMERICAN SIGN LANGUAGE II
Credit Hrs:  4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00   Clinical: 0.00
Other:  0.00   Fees: 0.00
Description: 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. (This course is designed for students who have completed ASL1140 as content builds upon the foundation laid in ASL I. Students should check individual university program requirements for transferability.) ASL1150 meets the foreign language and the International/Intercultural competency requirements.

CCN: *ASL2160   Title: AMERICAN SIGN LANGUAGE III
Credit Hrs:  4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00   Clinical: 0.00
Other:  0.00   Fees: 0.00
Description: 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 & 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.) ASL2160 meets the International/Intercultural competency requirement.

Area: AST  ASTRONOMY
CCN: *AST1002  Title: HORIZONS IN ASTRONOMY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: AST 1002 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, MAC1105, or MAC1105C level of equation solving is sufficient.

CCN: *AST1003  Title: ASTRONOMY OF THE SOLAR SYSTEM
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: AST 1003 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.

CCN: *AST1004  Title: ASTRONOMY OF STARS AND GALAXIES
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: AST 1004 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.

CCN: *AST1022L  Title: ASTRONOMY LABORATORY
Credit Hrs:  1.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 3.00
Description: 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.
CCN: *AST1037  Title: SCIENTIFIC SEARCH FOR LIFE IN THE UNIVERSE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: ATT AVIATION TECHNOLOGY

CCN: *ATF1100  Title: PRIVATE FLIGHT TRAINING
Credit Hrs: 3.00
Total Contact Hrs: 52.00  Lecture: 2.00  Lab: 50.00  Clinical: 0.00
Other: 0.00  Fees: 91.00
Description: This course provides the flight training and experience required by the Federal Aviation Regulations (FAA) for a Private Pilot Certificate. Minimum course hours, exclusive of the final check ride, are 36.5 flight hours, with a total of 49.5 instructional hours to include flight briefs and stage exams.

CCN: *ATF2204  Title: COMMERCIAL FLIGHT INSTRUCTION
Credit Hrs: 3.00
Total Contact Hrs: 90.00  Lecture: 10.00  Lab: 80.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course continues the training and experience of Commercial Flight I. Together with ATF2305 and ATF2205, it provides the aeronautical experience required to qualify for the FAA Commercial Pilot Certificate with instrument rating under Federal Aviation Regulations part. During this course, the student begins commercial pilot training. The minimum flight hours for this segment of commercial training is 44 hours with a total of 32.5 instructional hours to include flight briefs and stage exams.

CCN: *ATF2205  Title: COMPLEX FLIGHT INSTRUCTION
Credit Hrs: 3.00
Total Contact Hrs: 90.00  Lecture: 10.00  Lab: 80.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *ATF2305   Title: INSTRUMENT FLIGHT INSTRUCTION  
Credit Hrs:  3.00  
Total Contact Hrs:  90.00   Lecture: 10.00   Lab: 80.00   Clinical: 0.00  
Other: 0.00    Fees: 0.00  
Description: This course continues the training and experience begun in primary flight with instrument rating coursework. Students must have a private pilot certificate prior to enrollment and beginning instrument training. Together with ATF2204 and ATF2205, the course provides the aeronautical experience required to qualify for the FAA Commercial Pilot Certificate with instrument rating under Federal Aviation Regulations. The minimum instrument and FTD flight hours, exclusive of the final check ride, are 50 hours with a total of 71.5 instructional hours to include flight briefs and stage exams.

CCN: *ATF2400   Title: MULTI ENGINE FLIGHT TRAINING  
Credit Hrs:  1.00  
Total Contact Hrs: 25.00   Lecture: 5.00    Lab: 20.00   Clinical: 0.00  
Other: 0.00    Fees: 0.00  
Description: This course provides the flight training and experience required to obtain an FAA multi-engine rating. In order to receive credit for this course, the student must have earned an FAA multi-engine rating. Flight training fees are additional and must be paid directly to the College in advance.

CCN: *ATF2500   Title: CERTIFIED FLIGHT INSTRUCTOR TRAINING  
Credit Hrs:  2.00  
Total Contact Hrs: 45.00   Lecture: 15.00   Lab: 30.00   Clinical: 0.00  
Other: 0.00    Fees: 0.00  
Description: This course provides the flight and ground instruction to earn an FAA Certified Flight Instructor certificate. Part 141 approved coursework consists of 44 hours of ground instruction and 36.5 hours of flight hours including pre and post flight briefings. Course consists of the number of dual and solo flying hours and oral instruction required in to qualify the individual for the FAA Certified Flight Instructor oral and practical exam. FAA Part 61 training is available to some students. Please see department for eligibility. Student must earn the FAA Flight Instructor certificate to receive a grade.

CCN: *ATF2600   Title: INSTRUMENT FLIGHT SIMULATOR TRAINING  
Credit Hrs:  1.00  
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00  
Other: 0.00    Fees: 91.00  
Description: This course provides a total of 15 hours of training in one of the Emil Buehler Flight Lab 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. Student fee charged. Prerequisite: instructor's permission.

CCN: *ATF2630   Title: MULTI ENGINE SIMULATOR TRAINING
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 91.00
Description: This course provides a total of 15 hours of training in one of the Buehler Flight Lab 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. This course may be repeated for a maximum of 3 semester hours to meet a 3 semester hour elective requirement. Student fee charged.

CCN: *ATT1100   Title: AERONAUTICAL SCIENCE
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: An introduction to the theory of flight, this course is required for all aviation programs. It includes elementary aerodynamics, the major components of airplanes and their functions, the pertinent Federal Aviation Administration (FAA) regulations and basic airspace, aircraft performance and basic navigation, an introduction to meteorology and weather services and human factors. Successful completion of ATT100 and ASC1100 will prepare students for the FAA Private Pilot (airplane) Computerized Knowledge Exam. Professional Pilot Technology and Aviation Operations program majors must take this course concurrently with ASC1100. Prerequisite: College Placement Testing (CPT) scores must place student into college-level courses for English, reading and math; or have instructor's permission.

CCN: *ATT2110   Title: COMMERCIAL FLIGHT THEORY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Provides the aeronautical information needed to satisfactorily complete the FAA Commercial Pilot Knowledge Exam. Subject matter is tailored to the needs of the advanced pilot. It includes aerodynamics, airplane performance and systems, navigation, physiological factors, Federal Aviation Regulations and weather. It is recommended to complete the instrument rating before taking this course. Prerequisite: FAA Private Pilot Certificate or instructor's permission.

CCN: *ATT2120   Title: INSTRUMENT FLIGHT THEORY
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: Prepares student for FAA Instrument Rating (Airplane) Exam. 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 airways system, IFR charts, regulations and procedures as related to instrument flight. Prerequisite: private pilot's license or instructor's permission or

CCN: *ATT2820  Title: INTRODUCTION TO AIR TRAFFIC CONTROL  Credit Hrs: 3.00  Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: This course covers the fundamental topics used as an air traffic controller in today's system. Topics covered will include the National Airspace System, information systems for aviation, airport markings, different airspace classes, separation standards, radar services, aircraft identification and various other topics required by the FAA in their Basic Training Course.

CCN: *ATT2821C  Title: ATC RADAR PROCEDURES WITH LAB  Credit Hrs: 4.00  Total Contact Hrs: 72.00  Lecture: 48.00  Lab: 24.00  Clinical: 0.00  Other: 0.00  Fees: 201.00

Description: This course covers fundamental requirements for non-radar and terminal radar controllers. It builds on knowledge obtained from ATT2820 and ATT2822c. Topics taught will address non-radar procedures used by many FAA facilities. Additional topics will cover basic terminal approach control radar. In doing so this course will teach the student the procedures they would need to work non-radar and terminal radar. Topics taught will include but limited to, radar systems, non-radar procedures, spacing techniques, clearances, separation and more. The lab portion will utilize the FAA Academy procedures and airspace.

CCN: *ATT2822C  Title: VFR TOWER OPERATIONS WITH LAB  Credit Hrs: 4.00  Total Contact Hrs: 72.00  Lecture: 48.00  Lab: 24.00  Clinical: 0.00  Other: 0.00  Fees: 201.00

Description: This course covers general topics associated with the positions used in a VFR air traffic control tower. The course also covers the responsibilities of the four major position in a VFR control tower. As part of the knowledge each student will will demonstrate the information taught in both the classroom and the tower simulator. This will help better prepare students for the Federal Aviation Administration Academy.

CCN: *ATT2824C  Title: ATC ENROUTE OPERATIONS WITH LAB  Credit Hrs: 4.00
Total Contact Hrs: 72.00  Lecture: 48.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 201.00
Description: 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 lab portion will mirror a sector in operation at Aero Center. The student will be required to demonstrate practical application of the rules and procedure in use at this center sector.

CCN: *ATT2890  Title: ATC CAPSTONE PROJECT
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course covers the practical application of J07110.65 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.

CCN: *AVM1440  Title: AIRPORT AND AIRLINE SECURITY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: AVM1940  Title: AIRPORT OPERATIONS INTERNSHIP I
Credit Hrs:  3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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. Requires special application and criminal background check.

Prerequisite: instructor's permission or

CCN: *AVM2301  Title: GENERAL AVIATION MARKETING AND MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: *AVM2410  Title: AIRPORT MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 7.00

Description: 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.

CCN: *AVM2450  Title: AIRPORT PLANNING AND DESIGN
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 7.00

Description: 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.

CCN: *AVM2510  Title: AIRLINE MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: AVM2941  Title: AIRPORT OPERATIONS INTERNSHIP II
Credit Hrs: 3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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. Requires special application and criminal background check. Prerequisite: instructor's permission or

Area: AVM  AVIATION
CCN: *AVM3030  Title: CUSTOMER RELATIONS IN AVIATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This class covers customer relations concepts as well as the application of good customer relations behaviors within an aviation-related organization.

CCN: *AVM3302  Title: AVIATION SALES AND MARKETING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: This course covers basic marketing principles as they relate to the aviation industry and includes marketing research and marketing plan development. The unique aspects of the aviation industry such as seasonal demand, fluctuating fuel prices, social, economic, and political change will be covered as they result to the marketing plan.

CCN: *AVM3443   Title: AVIATION CONTINGENCY PLANNING & EMERGENCY
Credit Hrs: 3.00

Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: This course covers all areas of aviation contingency planning and emergency management to include a review of incidents, accidents, safety studies, accident investigations and changes which would in mitigate future risks. There is an emphasis on human factors including CRM and SMS as well as risk management concepts.

CCN: *AVM3522   Title: AIRLINE OPERATIONS I
Credit Hrs: 3.00

Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: The organizational structures of aviation organizations as well as the roles and responsibilities of airline personnel are covered. Communication with passengers and airline personnel regarding flight status as well as on-time operations is also covered.

Area: CE31 AVIATION
CCN: *AVM3600   Title: HUMAN RESOURCE MANAGEMENT IN AVIATION
Credit Hrs: 3.00

Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: 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.

Area: AVM AVIATION
CCN: *AVM3630   Title: EMPLOYEE RELATIONS IN AVIATION
Credit Hrs: 3.00

Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: 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.

CCN: *AVM4160   Title: AVIATION PLANNING
Credit Hrs: 3.00
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.

CCN: *AVM4170   Title: AVIATION PROJECT MANAGEMENT
Credit Hrs: 3.00
Description: 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.

CCN: *AVM4180   Title: QUALITY ASSURANCE IN AVIATION
Credit Hrs: 3.00
Description: 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.

CCN: *AVM4516   Title: DOMESTIC AVIATION OPERATIONS
Credit Hrs: 3.00
Description: 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.

CCN: *AVM4523   Title: AIRLINE OPERATIONS II
Credit Hrs: 3.00
Description: 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.

CCN: *AVM4540   Title: AVIATION FINANCE
Credit Hrs: 3.00
Description: This class covers financial issues and operations in the aviation environment. It includes budgeting, capital outlay planning, cost/benefit analysis, and financial statement interpretation.
CCN: *AVM4700   Title: INTERNATIONAL AVIATION OPERATIONS  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00  
Other:  0.00   Fees:  0.00  
Description: This class covers aviation operations in an international environment. The addition of language, culture, religion, international regulatory bodies, tariffs, duties, customs, and US Customs and Border Protection (CBP) and how they impact the operation will be covered.  
Area: ATT AVIATION TECHNOLOGY  
CCN: AVS1010   Title: INTRODUCTION TO AVIONICS  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00  
Other:  0.00   Fees:  0.00  
Description: 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.  
CCN: *AVS2700C   Title: AVIONICS COMPONENT REPAIR AND CALIBRATION  
Credit Hrs:  3.00  
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00  
Other:  0.00   Fees:  0.00  
Description: 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.  
CCN: AVS2760C   Title: INTRODUCTION TO ADVANCED AVIONICS  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00   Lecture: 24.00   Lab: 24.00   Clinical: 0.00  
Other:  0.00   Fees:  0.00  
Description: 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.  
CCN: AVS2770C   Title: INTRODUCTION TO AVIONICS ENGINEERING  
Credit Hrs:  3.00  
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00  
Other:  0.00   Fees:  0.00  
Description: 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.
CCN: *AVS2781C  Title: AVIONICS ENGINEERING II
Credit Hrs:  3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course is designed to introduce students to signal generation and manipulation. Students will understand ARINC and RS standards. Students will demonstrate the ability to design safe and functioning and complicated avionics circuits with specific functionality and polarity. Students will be able to demonstrate the ability to design circuits for audio and video circuits and be exposed to final FAA approval processes. The course content also includes training in communication, leadership, human relations, employability skills, and safe and efficient work practices. Students will continue to prepare to take the Element 3,6,8 and 9 of the FCC General Radiotelephone Operator's License (GRPL) examination and meet criteria to satisfy testing for the National Center for Aerospace & Transportation Technologies (NCATT), Aircraft Electronics Technician (AET) certification and all four endorsements.

CCN: *AVS2790C  Title: UNMANNED AERIAL VEHICLE (UAV) AVIONICS
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 24.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course exposes the student to the differences between avionics installations in aircraft and those in unmanned aerial vehicles (UAVs). Topics discussed will be compact harness design, repairable design, autopilots, flight control systems, and FAA's remote identification ruling.

CCN: AVS2930  Title: EMERGING TECHNOLOGIES IN AVIONICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *AVS2941  Title: AVIONICS INTERNSHIP & CAPSTONE
Credit Hrs:  3.00
Total Contact Hrs: 250.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 250.00  Fees: 0.00
Description: This course serves as an end-of-program internship. The student, in partnership with a local, approved avionics employer, will complete a minimum of 250-hours of relevant work which utilizes skills developed throughout the program. The professor, student, and employer will agree on assessments. The professor will visit the the worksite periodically throughout the semester to
ensure the student is complying with the agreed-upon plan. Alternatively, students may complete a relevant 250-hour, on-campus project, under faculty supervision, which incorporates skills learned throughout the program.

Area: CHM  CHEMISTRY
CCN: *BCH3023  Title: ELEMENTARY ORGANIC AND BIOLOGICAL CHEMISTRY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. An understanding of the principles of general chemistry is a pre-requisite.

CCN: *BCH3033  Title: BIOCHEMISTRY I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: ETC  BUILDING CONSTRUCTION & CIVIL
CCN: *BCN1210  Title: CONSTRUCTION MATERIALS
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Introduction to construction materials?covering the evaluation of construction materials, functional applications and code requirements in the use of wood, masonry, concrete, and steel framing, door, window and roofing assemblies, wall, floor and ceiling finishes.

CCN: *BCN1251C  Title: BUILDING CONSTRUCTION DRAWING I
Credit Hrs:  4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *BCN1272  Title: BUILDING CONSTRUCTION PLANS INTERPRETATION
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *BCN2253C  Title: BUILDING CONSTRUCTION DRAWING
Credit Hrs: 4.00
Total Contact Hrs: 96.00  Lecture: 48.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 8.00
Description: Principles and practices of computer aided drafting (CAD) employed in the construction industry.

CCN: *BCN2560  Title: MECHANICAL AND ELECTRICAL SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *BCN2721C  Title: CONSTRUCTION MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A study of the techniques and skills needed to plan, manage, and oversee the processes involved in building construction industry. A computer applications software is used in the course.

CCN: *BCT1706  Title: CONSTRUCTION DOCUMENTS
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course 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) MasterFormat 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.

CCN: *BCT1743  Title: BUILDING CONSTRUCTION LAW
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *BCT1767   Title: OSHA STANDARDS  
Credit Hrs:   3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other:  0.00  Fees: 10.00  
Description: 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.

CCN: *BCT1770   Title: CONSTRUCTION ESTIMATING I  
Credit Hrs:   2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other:  0.00  Fees: 0.00  
Description: 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.

CCN: *BCT2040   Title: MEP PLANS INTERPRETATION  
Credit Hrs:   2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other:  0.00  Fees: 0.00  
Description: 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.

CCN: *BCT2710   Title: INFRASTRUCTURE COORDINATION  
Credit Hrs:   2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other:  0.00  Fees: 0.00  
Description: 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.

CCN: *BCT2720C   Title: CONSTRUCTION SCHEDULING  
Credit Hrs:   3.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other:  0.00  Fees: 0.00  
Description: 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.

CCN: *BCT2760   Title: BUILDING CODES AND REGULATIONS  
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *BCT2771   Title: BUILDING CONSTRUCTION ADVANCED ESTIMATING
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: CE32 BUILDING & CONSTRUCTION
CCN: BCT2941L   Title: BUILDING CONSTRUCTION FIELD EXPERIENCE
Credit Hrs: 0.00
Total Contact Hrs: 144.00   Lecture: 0.00   Lab: 144.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: BOT BIOLOGICAL SCIENCE
CCN: *BOT2010   Title: GENERAL BOTANY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *BOT2010L   Title: GENERAL BOTANY LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 15.00
Description: 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.
CCN: *BOT2800   Title: PLANTS AND PEOPLE
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. BOT2800 meets the International/Intercultural competency requirement.

Area: BAN  BANKING
CCN: *BRC2001  Title: INTRODUCTION TO THE FINANCIAL INSTITUTION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: BSC  BIOLOGICAL SCIENCES
CCN: *BSC1005  Title: BIOLOGICAL PRINCIPLES FOR NON-MAJORS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Course designed to give students an understanding of the principles of Biology, while focusing on the nature and activities of living organisms. Course primarily for non-science majors.

CCN: *BSC1005L  Title: BIOLOGICAL PRINCIPLES FOR NON-MAJORS LAB
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 25.00
Description: 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.

CCN: *BSC1084  Title: BASIC ANATOMY AND PHYSIOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A basic anatomy and physiology survey 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 (BSC2085) 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
CCN: *BSC1311  Title: INTRODUCTION TO MARINE BIOLOGY
Credit Hrs:  3.00
Total Contact Hrs:  48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *BSC2010  Title: INTRODUCTION TO BIOLOGY I
Credit Hrs:  3.00
Total Contact Hrs:  48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

Area: BOT  BIOLOGICAL SCIENCE

CCN: *BSC2010L  Title: INTRODUCTION TO BIOLOGY I LABORATORY
Credit Hrs:  1.00
Total Contact Hrs:  48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other:  0.00  Fees:  34.00
Description: 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.

CCN: *BSC2011  Title: INTRODUCTION TO BIOLOGY II
Credit Hrs:  3.00
Total Contact Hrs:  48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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. Three hours lecture
per week.

CCN: *BSC2011L  Title: INTRODUCTION TO BIOLOGY II LABORATORY
Credit Hrs:  1.00
Total Contact Hrs:  48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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. Special fee charged.

Area: BSC BIOLOGICAL SCIENCES
CCN: *BSC2085 Title: HUMAN ANATOMY AND PHYSIOLOGY I
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. 3 hours of lecture per week. CHM 1032, CHM 1040, or CHM 1045 is very strongly recommended (see your program requirements).

CCN: *BSC2085L Title: HUMAN ANATOMY AND PHYSIOLOGY I LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 0.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Laboratory experiments coordinated with BSC1085, including microscope observation, study of anatomical models and dissection. Dissection exercises included.

Area: BOT BIOLOGICAL SCIENCE
CCN: *BSC2086 Title: HUMAN ANATOMY AND PHYSIOLOGY II
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. CHM 1032, CHM 1040, or CHM 1045 is very strongly recommended (see your program requirements). 3 hours of lecture per week.

CCN: *BSC2086L Title: HUMAN ANATOMY AND PHYSIOLOGY II LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 0.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 28.00
Description: Laboratory experiments coordinated with BSC1086, including microscope observation, study of anatomical models and dissection. Dissection exercises included.

Area: BIO BIOLOGY
CCN: *BSC2421  Title: INTRODUCTION TO BIOTECHNOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
Area: BOT  BIOLOGICAL SCIENCE

CCN: *BSC2421L  Title: INTRODUCTION TO BIOTECHNOLOGY LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 fingerprinting will be demonstrated.
Area: BSC  BIOLOGICAL SCIENCES

CCN: *BSC2910  Title: DIRECTED INDEPENDENT RESEARCH
Credit Hrs: 0.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 48.00  Fees: 0.00
Description: 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. Permission of Instructor Required.
Area: COE  COOPERATIVE EDUCATION

CCN: *BSC2949  Title: CO OP WORK EXPERIENCE
Credit Hrs: 3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: A course designed to provide training in a students 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. All students must contact
the Co-operative Education Office to obtain registration approval. Placement by Testing Department.

Area: BIO  BIOLOGY
CCN: *BSC4848   Title: SCIENTIFIC COMMUNICATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: AGR  AGRICULTURE
CCN: *BSC4911   Title: INDEPENDENT RESEARCH IN THE BIOLOGICAL SCIENCES
Credit Hrs:  4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: EVR  ENVIRONMENTAL SCIENCE
CCN: *BSC4930   Title: SPECIAL TOPICS IN BIOLOGICAL SCIENCE
Credit Hrs:  0.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: AGR  AGRICULTURE
CCN: *BSC4948   Title: SENIOR INTERNSHIP
Credit Hrs:  3.00
Total Contact Hrs: 144.00   Lecture: 0.00   Lab: 0.00   Clinical: 0.00
Other: 144.00   Fees: 0.00
Description: A course designed to provide training in a students 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. All students must contact the Co-operative Education Office to obtain registration approval. Placement by Testing Department.

Area: EDU  EDUCATION
CCN: *BTE3068  Title: FOUNDATIONS OF BUSINESS EDUCATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 4.75
Description: 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.

Area: BUL  BUSINESS LAW
CCN: *BUL2241  Title: BUSINESS LAW I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: *BUL2242  Title: BUSINESS LAW II
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: *BUL3130  Title: BUSINESS LAW AND ETHICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: *BUL4264  Title: INTERNATIONAL BUSINESS LAW
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

Area: COP COMPUTER SCIENCE
CCN: *CAP2760C Title: INTRO TO DATA ANALYTICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 24.00 Lab: 24.00 Clinical: 0.00
Other: 0.00 Fees: 95.00
Description: 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.

Area: CCJ CRIMINAL JUSTICE
CCN: *CCJ1010 Title: INTRODUCTION TO CRIMINOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: A consideration of human behavior and how it relates to the duties and responsibilities of the criminal justice practitioner.

CCN: *CCJ1020 Title: INTRODUCTION TO CRIMINAL JUSTICE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: CCJ2933 Title: CORRECTIONS PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course offers practical experiences in corrections or related disciplines of criminal justice giving the student the opportunity to apply classroom knowledge. Prerequisite: CCJ1020 or permission of instructor.

Area: COE COOPERATIVE EDUCATION
CCN: *CCJ2949 Title: CO OP WORK EXPERIENCE
Credit Hrs: 3.00
Total Contact Hrs: 144.00 Lecture: 0.00 Lab: 0.00 Clinical: 0.00
Other: 144.00 Fees: 0.00
Description: 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. All students must contact the Co-operative Education Office to obtain registration approval.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *CDA2105C  Title: SYSTEMS INTEGRATION AND ARCHITECTURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CDA4411  Title: SYSTEMS INTEGRATION AND ARCHITECTURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CEN4341  Title: PLATFORM TECHNOLOGIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CEN4722  Title: HUMAN COMPUTER INTERACTION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: ETE  ENGINEERING TECHNOLOGY
CCN: *CET1114C  Title: DIGITAL TECHNIQUES
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 30.00
Description: 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. Extensive laboratory practice.
CCN: *CET1117C  Title: MICROPROCESSORS I
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 30.00
Description: 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.
Area: COP  COMPUTER SCIENCE
CCN: *CET1630C  Title: NETWORK CABLING TECHNOLOGIES
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: ETE  ENGINEERING TECHNOLOGY
CCN: *CET2123C  Title: MICROPROCESSORS II  
Credit Hrs:  4.00  
Total Contact Hrs: 80.00   Lecture: 56.00   Lab: 24.00   Clinical: 0.00  
Other:  0.00    Fees:  0.00  
Description: Analysis of 8/16 bit microprocessors and microcomputers 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. This will require the student to purchase various electronic components costing approximately $125.

CCN: *CET2486C  Title: NETWORKING TECHNOLOGY  
Credit Hrs:  3.00  
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00  
Other:  0.00    Fees:  0.00  
Description: 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.

Area: COP  COMPUTER SCIENCE

CCN: *CET2625C  Title: CISCO CCNP ROUTING  
Credit Hrs:  3.00  
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00  
Other:  0.00    Fees:  98.00  
Description: 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.

CCN: *CET2688C  Title: SYSTEM SECURITY PRACTITIONER (SSCP)  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00  
Other:  0.00    Fees:  10.00  
Description: 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. Practice will will also be provided to thoroughly prepare students for the SSCP certification exam offered by (ISC)2.

Area: ETE  ENGINEERING TECHNOLOGY

CCN: *CET2742C  Title: ADVANCED NETWORKING  
Credit Hrs:  3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.
Area: COP  COMPUTER SCIENCE
CCN: *CET3620C  Title: CISCO NETWORKING IV
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.
CCN: *CET3660C  Title: CISCO CCNA SECURITY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 98.00
Description: 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.
CCN: *CGS1060C  Title: COMPUTER AND INTERNET LITERACY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 38.00
Description: 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.
CCN: *CGS1510C  Title: EXCEL DATA ANALYSIS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 24.00   Lab: 24.00   Clinical: 0.00
Other: 0.00    Fees: 10.00
**Description:** 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.

**CCN:** *CGS1540C  Title: MICROSOFT ACCESS*

**Credit Hrs:** 3.00  
**Total Contact Hrs:** 48.00  
**Lecture:** 24.00  
**Lab:** 24.00  
**Clinical:** 0.00  
**Other:** 0.00  
**Fees:** 10.00

**Description:** This course covers the ability to create and maintain Access Database objects including tables, relationships, data entry forms, multilevel reports, and multi-table queries. Practice will also be provided to thoroughly prepare students for the Microsoft Access certification exam.

**CCN:** *CGS1557C  Title: INTERNET SITE DESIGN*

**Credit Hrs:** 3.00  
**Total Contact Hrs:** 48.00  
**Lecture:** 40.00  
**Lab:** 8.00  
**Clinical:** 0.00  
**Other:** 0.00  
**Fees:** 0.00

**Description:** 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.

**Area:** CGS  COMPUTER SCIENCE

**CCN:** *CGS2100C  Title: COMPUTER APPLICATIONS*

**Credit Hrs:** 3.00  
**Total Contact Hrs:** 48.00  
**Lecture:** 32.00  
**Lab:** 16.00  
**Clinical:** 0.00  
**Other:** 0.00  
**Fees:** 0.00

**Description:** 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.

**Area:** MMT  MULTIMEDIA TECHNOLOGY

**CCN:** *CGS2554C  Title: WEB DEVELOPMENT 3*

**Credit Hrs:** 3.00  
**Total Contact Hrs:** 48.00  
**Lecture:** 24.00  
**Lab:** 24.00  
**Clinical:** 0.00  
**Other:** 0.00  
**Fees:** 0.00

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

Area: EDF  EDUCATION: FOUNDATION & POLICY
CCN: *CHD1320  Title: CURRICULUM PLANNING FOR EARLY CHILDHOOD
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CHD1331  Title: CREATIVITY FOR YOUNG CHILDREN
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CHD1334  Title: CHILDREN'S LITERATURE & LANGUAGE ARTS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CHD1338  Title: MATH & SCIENCE FOR THE YOUNG CHILD
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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."

CCN: CHD1940  Title: PRACTICUM I: OBSERVATION AND EVALUATION
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 24.00  Fees: 8.15
Description: Offers an opportunity to observe children in child care settings, gain understanding of their behavior and evaluate their environments.

CCN: CHD2441  Title: PRACTICUM II
Credit Hrs:  3.00
Total Contact Hrs: 115.00  Lecture: 15.00  Lab: 0.00  Clinical: 0.00
Other: 100.00  Fees: 0.00
Description: Facilitates practical experiences in techniques of early childhood education. Requires qualified supervision in a school or center for preschool education.
**CCN: *CHD2800  Title: ADMIN AND MGMT IN E C EDUCATION**
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

**Area: CHM  CHEMISTRY**

**CCN: *CHM1020  Title: CHEMISTRY IN EVERYDAY LIFE**
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Selected topics from general chemistry and their applications in one or more of the following areas: environmental science, food and nutrition, health and medicine, energy, and/or everyday materials. This course is designed specifically for students seeking to fulfill their General Education requirement in science.

**CCN: *CHM1025  Title: INTRODUCTION TO CHEMISTRY**
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course will provide beginning students with the skills to understand the basic concepts of chemistry, which will enable them to be successful in the first semester of General Chemistry I, CHM 1045. This course is designed for students who have not previously had a successful high school chemistry experience. Topics covered include chemical measurements, atomic structure, the periodic table, chemical bonding, inorganic compound nomenclature and formula writing, stoichiometry, gases, liquids, solids, solutions, and chemical reactions.

**CCN: *CHM1032  Title: CHEMISTRY FOR HEALTH SCIENCES**
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Selected topics from general chemistry, organic chemistry and biochemistry. This course is designed specifically for Nursing and other Allied Health Technology students.

**CCN: *CHM1032L  Title: CHEMISTRY FOR HEALTH SCIENCES LAB**
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 19.00
Description: Laboratory exercises to accompany CHM1032.
CCN: *CHM1040  Title: GENERAL CHEMISTRY A (EXPANDED SEQUENCE)
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CHM1041  Title: GENERAL CHEMISTRY B (EXPANDED SEQUENCE)
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CHM1045  Title: GENERAL CHEMISTRY 1
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This is the first course in a two semester sequence, CHM1045 and CHM1046. 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, thermochemistry, 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 CHM1025 is highly recommended.

CCN: *CHM1045L  Title: GENERAL CHEMISTRY I LAB
Credit Hrs:  1.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 19.00
Description: Laboratory experiments to accompany CHM1045 for hands on experience.

CCN: *CHM1046  Title: GENERAL CHEMISTRY II
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This is the final course of the two-semester general chemistry sequence: CHM1045 and CHM1046; These sequences include two laboratories: (1)CHM1045L to be taken concurrently with CHM1045, and (2)CHM1046L to be taken with CHM1046. Topics covered include thermochemistry, thermodynamics, kinetics, equilibrium, electrochemistry, coordination chemistry, descriptive chemistry of metals, nuclear chemistry and an introduction to organic chemistry.

CCN: *CHM1046L  Title: GENERAL CHEMISTRY II LAB
Credit Hrs: 1.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 26.00
Description: 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.

CCN: *CHM2210   Title: ORGANIC CHEMISTRY I
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *CHM2210L  Title: ORGANIC CHEMISTRY I LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 65.00
Description: Organic laboratory experiments and preparations to accompany CHM2210.
Special fee charged.

CCN: *CHM2211    Title: ORGANIC CHEMISTRY II
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *CHM2211L  Title: ORGANIC CHEMISTRY II LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 93.00
Description: Appropriate experiments and preparation to compliment CHM2211.
Special fee charged.

Area: EDU EDUCATION
CCN: *CHM3203 Title: ORGANIC & BIOCHEMISTRY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course introduces the preprofessional 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.

Area: COP COMPUTER SCIENCE
CCN: *CIS1000C Title: INTRODUCTION TO COMPUTER SCIENCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 40.00 Lab: 8.00 Clinical: 0.00
Other: 0.00 Fees: 10.00
Description: 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.
CCN: *CIS1513C  Title: PROJECT MANAGEMENT
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 80.00
Description: 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. Practice will also be provided to thoroughly prepare students for the Project+ certification exam offered by CompTIA.
Area: COP  COMPUTER SCIENCE
CCN: *CIS2028  Title: INFORMATION SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: CIS2910C  Title: IT ENTREPRENEURSHIP CAPSTONE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
Area: COE  COOPERATIVE EDUCATION
CCN: *CIS2949  Title: CO OP WORK EXPERIENCE
Credit Hrs: 3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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. All students must contact the Co-operative Education Office to obtain registration approval.

Area: COP  COMPUTER SCIENCE
CCN: *CIS3204C  Title: ETHICAL HACKING I
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course provides a foundation in 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. Part one of a two sequence course.

Area: COMP  COMPUTER AND INFO SCIENCE
CCN: *CIS3361C  Title: CYSA+
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: The information technology (IT) professional must understand, apply, and manage information assurance and security (IAS) in computing, communication, and organizational systems. This course will provide the knowledge and skills required to configure and use threat detection tools, perform data analysis and interpret the results to identify vulnerabilities, threats and risks to an organization with the end goal of securing and protecting applications and systems within an organization. Practice will also be provided to thoroughly prepare students for the CompTIA CySA+ certification exam.

CCN: *CIS4253  Title: SOCIAL AND PROFESSIONAL ISSUES IN IT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CIS4596  Title: IT CAPSTONE PROJECT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Note: This course must be taken in the final semester.

Permission from the Deans of Business, Technology & Management and Student Affairs.

Area: COP  COMPUTER SCIENCE
CCN: *CIS4935C  Title: ETHICAL HACKING II: CAPSTONE
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This course is a continuation of Ethical Hacking. 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.

Area: CCJ  CRIMINAL JUSTICE
CCN: *CJC2000  Title: INTRODUCTION TO CORRECTIONS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *CJC2162  Title: PROBATION AND PAROLE PROCEDURES
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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. 3 hrs. lec.

CCN: *CJE1300  Title: INTRO TO CRIMINAL JUSTICE ADMINISTRATION & MGMT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: Introduction to principles of administration and managerial concepts characteristic of criminal justice organizations.

CCN: *CJE2170  Title: COMPARATIVE WORLD POLICE AGENCIES
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

**CCN: *CJE2400   Title: POLICE COMMUNITY RELATIONS**
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

**CCN: *CJE2580   Title: INTERVIEWS AND INTERROGATIONS**
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

**CCN: *CJE2600   Title: CRIMINAL INVESTIGATION**
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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 learn the elements of preliminary and follow-up investigations and the roles and responsibilities of criminal investigators such as the first responding officer, the detective, and the crime scene investigator.

**CCN: *CJE2640C   Title: INTRODUCTION TO CRIMINALISTICS**
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 40.00 Lab: 8.00 Clinical: 0.00
Other: 0.00 Fees: 10.00
Description: This course is an introduction to the fundamentals of crime scene investigations and processing. Students will be familiarized with the basic elements of crime scene processing, crime scene searching methods, sketching, and report writing. There will be an extensive hands-on lab component to this course. Special fee charged. 1 hr., 2 hrs., Lab.

**CCN: *CJE2642C   Title: CRIMINALISTICS PRACTICUM**
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 10.00
Description: The knowledge and skills learned in the prerequisites are coordinated in practical, hands-on exercises which will develop expertise in the complete processing of crime scenes and the processing of evidence in a laboratory setting. Special fee charged. 1 hr. Lec., 2 hrs., Lab.
CCN: *CJE2643C  Title: ADVANCED FORENSIC INVESTIGATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 40.00  Lab: 8.00  Clinical: 0.00
Other:  0.00  Fees: 22.00
Description: This course is an advanced course in crime scene investigations and analysis. This course will build on material learned in the prerequisite courses. Students will learn about advanced crime scene techniques involving blood spatter, gunshot trajectory, and injuries to the body. There will be an extensive hands-on lab component to this course. Special fee charged. 1hr., Lec. 2 hrs., Lab.

CCN: *CJE2722  Title: POLYGRAPH THEORY AND OPERATIONS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: *CJE2723  Title: TEST QUSTN CONSTR & SEMANTICS/PERSONNEL SCREENING
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: The construction of test questions appropriate to the personnel aspect of the polygraph is emphasized. Course offered through Deception Control, Inc., Ft. Lauderdale.

CCN: *CJE2724  Title: TEST QUSTN CONSTR & SEMANTICS/CRIMINAL CASES
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: The construction of test questions appropriate to the criminal case aspect of the polygraph is emphasized. Course offered through Deception Control, Inc., Ft. Lauderdale.

CCN: *CJE2725  Title: CHART ANALYSIS, VALIDITY AND RELIABILITY
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: *CJE2726  Title: POLYGRAPH OPERATIONS PRACTICUM
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: *CJE2770C  Title: FORENSIC PHOTOGRAPHY AND VISUAL DOCUMENTATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 40.00   Lab: 8.00   Clinical: 0.00
Other: 0.00   Fees: 10.00
Description: The student is taught specific skills necessary to visually document and photographically preserve crime scenes and evidence, from both technical and legal standpoints.
CCN: *CJJ2001   Title: JUVENILE JUSTICE
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *CJL1062   Title: CONSTITUTIONAL LAW
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: An examination of the U.S. Constitution, its amendments and its impact on present day criminal justice practitioners. 3 hrs. Lec.
CCN: *CJL1100   Title: CRIMINAL LAW
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. 3 hrs. lec.
CCN: *CJL1130   Title: CRIMINAL EVIDENCE AND COURT PROCEDURES
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *CJL1140   Title: CORRECTIONAL LAW
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *CJL2060   Title: CIVIL RIGHTS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: BEH  BEHAVIORAL SCIENCE  
CCN: *CLP2140  Title: ABNORMAL PSYCHOLOGY  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: This course concentrates on the explanation of psychological 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.

Area: COMP  COMPUTER AND INFO SCIENCE  
CCN: *CNT3604  Title: SYSTEM ADMINISTRATION AND MAINTENANCE  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: *CNT3702  Title: INFRASTRUCTURE AND FACILITIES PLANNING  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: *CNT4422C  Title: CLOUD SECURITY (CCSP)  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 10.00  
Description: 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.
Area: COMMUNICATIONS

CCN: *COM2053   Title: INTRODUCTION TO SPEECH COMMUNICATION AND CIVIC
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: 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.

CCN: *COM2336   Title: COMPUTER MEDIATED COMMUNICATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: Course focuses on the organization, structure and function, and social aspects of electronic communication. It will introduce principles, techniques, and methods of electronic/computer mediated communication, journalism, story-telling, and copywriting. The course will also instruct students how to more effectively balance issues with computer mediated communication with face to face encounters - exploring issues related to globalization, information richness, cultural issues in computer mediation communication, as well as issues of surveillance and privacy.

CCN: *COM2370   Title: NEW MEDIA COMMUNICATION APPLICATIONS I
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: 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.

CCN: *COM2371   Title: NEW MEDIA COMMUNICATION APPLICATIONS II
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: Course examines and identifies various theories and best practices related to organizational and network communication solutions while also
introducing students to appropriate transmedia
technologies and new media approaches in view of the creation
of digitally/new media-based branding messages.

CCN: *COM2372   Title: NEW MEDIA COMMUNICATION FOR BUSINESS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *COM2412   Title: COMMUNICATION METHODS AND CULTURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *COM2941   Title: NEW MEDIA COMMUNICATION INTERNSHIP
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: COP  COMPUTER SCIENCE
CCN: *COP1000C  Title: INTRODUCTION TO COMPUTER PROGRAMMING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 10.00
Description: 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.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *COP1250C  Title: PROGRAMMING 1
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.

Area: COP  COMPUTER SCIENCE
CCN: *COP1334C  Title: INTRODUCTION TO C++
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 24.00   Lab: 24.00   Clinical: 0.00
Other: 0.00    Fees: 10.00

Description: 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.

CCN: *COP1700C  Title: INTRODUCTION TO DATABASE AND MYSQL
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 95.00

Description: 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.

CCN: *COP2071C  Title: SQL FUNDAMENTALS
Credit Hrs:  4.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 95.00

Description: 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.

Area: COMP  COMPUTER AND INFO SCIENCE
CCN: COP2251C   Title: PROGRAMMING II
Credit Hrs:  4.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.

Area: COP COMPUTER SCIENCE
CCN: *COP2360C Title: C# PROGRAMMING
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 10.00
Description: 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.

CCN: *COP2361C Title: OBJECT-ORIENTED ANALYSIS AND DESIGN
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 10.00
Description: 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.

CCN: *COP2658C Title: IOS APPLICATION DEVELOPMENT I
Credit Hrs: 3.00
Total Contact Hrs: 64.00 Lecture: 48.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *COP2660C Title: ANDROID APPLICATION DEVELOPMENT I
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *COP2800C Title: PROGRAMMING IN JAVA
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 10.00
Description: 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.

CCN: COP2940  Title: WEB PROGRAMMING INTERNSHIP
Credit Hrs: 3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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.

CCN: *COP3335C  Title: INTERMEDIATE C++ PROGRAMMING
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 10.00
Description: 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.

Area: COMP COMPUTER AND INFO SCIENCE

CCN: *COP3560C  Title: IMMERSIVE TECHNOLOGIES 2
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *COP3668C  Title: IMMERSIVE TECHNOLOGIES 1
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *COP3808C  Title: WEB DEVELOPMENT I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: An introduction to the common principles of computer programming and the basics of a commonly used programming language, including methods. Students will gain a good understanding of Object-Orientated Programming (OOP) in web development.

CCN: *COP3809C  Title: WEB DEVELOPMENT II
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This is a new course for the new Web Coding and Development Specialization in the T300, Bachelor of Applied Science in Information Technology.

CCN: *COP4111C  Title: INTERMEDIATE WEB SCRIPTING
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 10.00
Description: 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.

CCN: *COP4370C  Title: WEB DEVELOPMENT III
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course introduces students to the database portion of a web application, and students will learn about Project and Product Management in web design.

CCN: *COP4450C  Title: WEB DEVELOPMENT IV
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course covers Advanced Front End Web Development, and will dive deeper into the popular front and 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.

CCN: *COP4565C  Title: IMMERSIVE TECHNOLOGIES 3
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *COP4850C  Title: IMMERSIVE TECHNOLOGIES 4
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *COP4858  Title: INTEGRATIVE PROGRAMMING AND TECHNOLOGIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *COP4940  Title: INTERNSHIP
Credit Hrs: 3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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.

Area: POS  POLITICAL SCIENCE
CCN: *CPO2002  Title: INTRODUCTION TO COMPARATIVE GOVERNMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CPO2140  Title: GOVERNMENT AND POLITICS OF SPAIN
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: An introduction to the understanding of Spain's governmental 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.

Area: CRW CREATIVE WRITING
CCN: *CRW1001 Title: CREATIVE WRITING I
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: The course is structured toward producing literary fiction, poetry, creative non-fiction and dramatic forms. Student writing will be the primary basis for critical discussion with emphasis on fundamental aspects of fiction, poetry, creative non-fiction, and/or drama, as illustrated in master writers' work and demonstrated in student work. Readings, craft analysis, workshops, exercises, discussions, and lectures provide students with the opportunity to develop the craft of creative writing. CRW1001 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. CRW1001 meets the International/Intercultural competency requirement.

CCN: *CRW1100 Title: FICTION WRITING
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *CRW1300 Title: POETRY WRITING
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *CRW2002 Title: CREATIVE WRITING WORKSHOP II
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: A continuing development of creative writing ability.
CCN: *CRW2003   Title: ADVANCED CREATIVE WRITING WORKSHOP
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: A continuing development of creative writing ability. Students may work on independent writing projects. Directed independent study. Instructor's Approval.

CCN: *CRW2005   Title: ADVANCED CREATIVE WRITING WORKSHOP
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 16.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: A continuing development of creative writing ability. Students may work on independent writing projects. Directed independent study. Instructor's Approval.

Area: COP  COMPUTER SCIENCE
CCN: *CTS1106C  Title: UNIX
Credit Hrs: 3.00
Total Contact Hrs: 64.00 Lecture: 48.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *CTS1111C  Title: LINUX +
Credit Hrs: 4.00
Total Contact Hrs: 64.00 Lecture: 32.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 114.00
Description: 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.

CCN: *CTS1133C  Title: A+ COMPREHENSIVE
Credit Hrs: 4.00
Total Contact Hrs: 64.00 Lecture: 32.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 100.00
Description: 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. Practice will also be provided to
thoroughly prepare students for the A+
certification exam offered by CompTIA.

CCN: *CTS1134C  Title: NETWORK+
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00    Fees: 85.00
Description: 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.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *CTS1146C  Title: CLOUD COMPUTING PRACTITIONER
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course will provide students with an overall
understanding of cloud computing concepts,
independent of specific technical roles. This
course provides a detailed overview of AWS core
services, security architecture, pricing,
students will learn the required skills to support
virtualized systems. This course will assist the
student in preparing for the AWS Could
Practitioner certification.

CCN: *CTS1212C  Title: ADOBE PHOTOSHOP
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 36.00  Lab: 12.00  Clinical: 0.00
Other: 0.00    Fees: 17.00
Description: 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.

Area: COP  COMPUTER SCIENCE
CCN: *CTS1214C  Title: PROJECT MANAGEMENT APPLICATIONS & TOOLS
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 36.00   Lab: 12.00   Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: In this course, students will learn to manage project resources, task assignments and scheduling using industry relevant application tools in support of workforce skills. They will also learn best practices and techniques used to tracking and manage projects. The course covers a combination of applications, to include waterfall, and agile project management environments.

CCN: *CTS1390C  Title: INSTALLATION, STORAGE, AND COMPUTER WITH WINDOWS
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other:  0.00    Fees:  56.00
Description: This course focuses primarily on the installation, and compute features and functionality available in Windows Server. It covers general 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 Exam 98-365: Windows Server Administration Fundamentals offered by Microsoft.

CCN: *CTS1661C  Title: CISCO CCNA1
Credit Hrs:  4.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: Cisco Networking Academy participants develop workforce readiness skills and build a foundation for success in networking-related careers and degree programs. With the support of video and rich interactive media, participants learn, apply and practice CCNA knowledge and skills through a series of in-depth hands-on experiences and simulated activities that reinforce their learning. Upon completion of this offering, learners will be prepared to take the Cisco CCNA certification exam.

CCN: *CTS1808C  Title: WEBSITE ANIMATION
Credit Hrs:  3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.

CCN: *CTS1851C  Title: CIW WEB FOUNDATIONS
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 95.00
Description: 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.

CCN: *CTS1855C  Title: WEB AUTHORING I
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CTS1861C  Title: WEB AUTHORING II
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 particular emphasis on creating user interfaces for mobile devices. It focuses on teaching specific development techniques and strategies.

CCN: *CTS2120C  Title: SECURITY+
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 165.00
Description: 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.

CCN: *CTS2126C  Title: PENTEST+
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course will help the students learn concepts
and techniques of penetration testing like planning and scoping a penetration testing assessment, exploiting wired and wireless networks, exploiting application-based vulnerabilities, performing exploitation techniques, understanding how to finalize a penetration test, and more. This course will help to prepare to pass the CompTIA PenTest+ certification exam.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *CTS2148C  Title: PROJECT+
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course reviews the entire project life cycle, and thoroughly prepares students for the Project+ certification exam offered by CompTIA.

Area: COP COMPUTER SCIENCE
CCN: *CTS2156C  Title: MICROSOFT ENTERPRISE DESKTOP SUPPORT
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *CTS2314C  Title: NETWORK DEFENSE AND COUNTERMEASURES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: CE01 COMPUTER
CCN: *CTS2375C  Title: CLOUD+
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 10.00
Description: 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.

CCN: *CTS2376C  Title: MICROSOFT IDENTITY AND SERVICES
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course prepares individuals to accomplish the following technical tasks: design and implement Microsoft 365 services, manage user identity and roles, manage access and authentication, and plan Office 365 workloads and applications. Practice will also be provided to thoroughly prepare students for the Microsoft MCSA certification exam MS-100, Microsoft Identity and Services.

Area: COP  COMPUTER SCIENCE
CCN: *CTS2377C  Title: MICROSOFT MOBILITY AND SECURITY
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course prepares individuals to accomplish the following technical tasks: implement modern device services; implement Microsoft 365 security and threat management; and manage Microsoft 365 governance and compliance. Practice will also be provided to thoroughly prepare students for the Microsoft MCSA certification exam MS-101 Mobility and security.

Area: COP  COMPUTER SCIENCE
CCN: *CTS2380C  Title: CLOUD ARCHITECTING I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: The objective of this course is to provide the fundamental knowledge of building an IT infrastructure using Amazon Web Services, AWS Part I. This course is designed to teach students how to optimize the use of AWS Cloud systems by deeply understanding AWS services and how they fit into cloud-based solutions. This course emphasizes the best implementation practices depending on industry, type of application, and size of the business. This course will assist the student in preparing for the AWS Cloud Architect certification.

Area: COP  COMPUTER SCIENCE
CCN: *CTS2383C  Title: MANAGING A SERVER NETWORK OPERATING SYSTEM
Credit Hrs:  3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *CTS2389C  Title: IDENTITY WITH WINDOWS SERVER
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 56.00
Description: This course focuses on the identity functionality
in Windows Server. It covers the installation
and configuration of Active Directory Domain
(AD DS), in addition to Group Policy implementa-
tion for non-Nano Server environments. 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
Exam 98-365: Windows Server Administration
Fundamentals offered by Microsoft.

CCN: *CTS2391C  Title: NETWORKING WITH WINDOWS SERVER
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 56.00
Description: This course focuses on the networking features and
functionality available in Windows Server 2016. It
covers DNS, DHCP, and IPAM implementations, in
addition to remote access solutions, such as VPN
and Direct Access. It also covers DFS and
BranchCache solutions, high performance network
features and functionality, and implementation of
software-defined networking (SDN) solutions, such
as Hyper-V Network Virtualization (HNV) and
Network Controller. Practice will also be provided
to thoroughly prepares students for the Exam
98-365: Windows Server Administration Fundamentals
offered by Microsoft.

CCN: *CTS2395C  Title: IMPLEMENTING A DESKTOP INFRASTRUCTURE
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *CTS2396C  Title: IMPLEMENTING DESKTOP APPLICATION ENVIRONMENTS
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *CTS2420C  Title: MICROSOFT: .NET FOUNDATIONS
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CTS2437C  Title: MICROSOFT SQL SERVER DATABASE ADMINISTRATION I
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CTS2438C  Title: MICROSOFT SQL SERVER DATABASE ADMINISTRATION II
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course provides students with the knowledge and skills to design, optimize, and maintain a database administrative solution for Microsoft SQL Server.

CCN: *CTS2445C  Title: ORACLE DEVELOPER
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CTS2446C  Title: ORACLE DEVELOPER II
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CTS2464C  Title: SUN: ADVANCED JAVA PROGRAMMING
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *CTS2628C  Title: CCNP ENTERPRISE: CORE NETWORKING
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: CCNP Enterprise: Core Networking (ENCOR) provides students with a broad scope of architectural understanding and implementation skills required by enterprise networks. The course covers switching, routing, wireless, and related security topics along with the technologies that support software-defined, programmable networks.
CCN: *CTS2629C  Title: CCNP ENTERPRISE: ADVANCED ROUTING  
Credit Hrs: 4.00  
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: CCNP Enterprise: Advanced Routing (ENARSI) provides students with an in-depth knowledge to support the implementation and troubleshooting of advanced routing technologies and services including layer 3 VPN services, infrastructure security and infrastructure services used in enterprise networks.  
Area: COMP COMPUTER AND INFO SCIENCE  
CCN: *CTS2651C  Title: ROUTER TECHNOLOGY  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.  
CCN: *CTS2652C  Title: ADVANCED ROUTER TECHNOLOGY  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.  
Area: COP  COMPUTER SCIENCE  
CCN: *CTS2662C  Title: CISCO CCNA2  
Credit Hrs: 4.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: In this curriculum, Cisco Networking Academy participants develop workforce readiness skills and build a foundation for success in networking-related careers and degree programs. With the support of video and rich interactive media, participants learn, apply, and practice CCNA knowledge and skills through a series of in-depth hands-on experiences and simulated activities that reinforce their learning. This is the second course in a series of three courses that will prepare learners for the Cisco CCNA certification exam.  
CCN: *CTS2663C  Title: CISCO CCNA3  
Credit Hrs: 4.00
In this curriculum, Cisco Networking Academy participants develop workforce readiness skills and build a foundation for success in networking-related careers and degree programs. With the support of video and rich interactive media, participants learn, apply and practice CCNA knowledge and skills through a series of in-depth hands-on experiences and simulated activities that reinforce their learning. This is the third course in a series of three courses that will prepare learners for the Cisco CCNA certification exam.

**CCN: *CTS2852C  Title: CLIENT-SIDE SCRIPTING**

**Credit Hrs: 4.00**

**Total Contact Hrs: 64.00 Lecture: 32.00 Lab: 32.00 Clinical: 0.00**

**Other: 0.00 Fees: 95.00**

**Description:** This course teaches developers how to use the features of the JavaScript language, design client-side, and platform independent solutions. Students learn how to write JavaScript programs, script for the JavaScript object model, control program flow, validate forms, animate images, target frames, and create cookies. Students will also understand and use the most popular applications of JavaScript.

**CCN: *CTS2881C  Title: CLOUD ARCHITECTING II**

**Credit Hrs: 4.00**

**Total Contact Hrs: 64.00 Lecture: 32.00 Lab: 32.00 Clinical: 0.00**

**Other: 0.00 Fees: 0.00**

**Description:** The objective of this course is to provide the fundamental knowledge of building an IT infrastructure using Amazon Web Services, AWS Part II. This course is designed to teach students how to optimize the use of AWS Cloud systems by deeply understanding AWS services and how they fit into cloud-based solutions. This course emphasizes the best implementation practices depending on industry, type of application, and size of the business. This course will assist the student in preparing for the AWS Cloud Architect certification.

**Area: COMP COMPUTER AND INFO SCIENCE**

**CCN: *CTS3103C  Title: VIRTUALIZATION CONCEPTS AND IMPLEMENTATION**

**Credit Hrs: 3.00**

**Total Contact Hrs: 64.00 Lecture: 32.00 Lab: 32.00 Clinical: 0.00**

**Other: 0.00 Fees: 0.00**

**Description:** 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.

**CCN: *CTS3128C  Title: CISSP**

**Credit Hrs: 4.00**

**Total Contact Hrs: 64.00 Lecture: 32.00 Lab: 32.00 Clinical: 0.00**

**Other: 0.00 Fees: 0.00**

**Description:** This course supports the Certified Information

Area: COP COMPUTER SCIENCE
CCN: *CTS3350C Title: IMPLEMENTING ADVANCED SERVER 2012 INFRASTRUCTURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 56.00
Description: 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.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *CTS3357C Title: DESIGNING AND IMPLEMENTING A SERVER INFRASTRUCTURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 56.00
Description: 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.

Area: COP COMPUTER SCIENCE
CCN: *CTS3363C Title: MICROSOFT SYSTEM CENTER CONFIGURATION MANAGER
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 10.00
Description: 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.

Area: COP COMPUTER SCIENCE
CCN: *CTS3626C Title: CISCO CCNP ROUTING
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.
CCN: *CTS3859C  Title: CIW E-COMMERCE SPECIALIST  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: *CTS3870C  Title: SERVER-SIDE SCRIPTING  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 95.00  
Description: 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.

CCN: *CTS4338C  Title: MICROSOFT EXCHANGE SERVER  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 56.00  
Description: 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, back up 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.

CCN: *CTS4348C  Title: RED HAT SYSTEM ADMINISTRATION 3  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: This course is designed to give students working knowledge to install and configure Ansible on a management workstation and prepare managed hosts for automation. Students will write Ansible Playbooks to automate tasks, and run them to ensure servers are correctly deployed and configured. Examples of approaches to automate common Linux system administration tasks will be explored. This course is aligned with the Red Hat System Administration III: Linux Automation (RH294)
CCN: *CTS4627C  Title: CISCO CCNP SWITCHING  
Credit Hrs:  3.00  
Total Contact Hrs:  48.00  Lecture:  32.00  Lab:  16.00  Clinical:  0.00  
Other:  0.00  Fees:  0.00  
Description: 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.

CCN: *CTS4663C  Title: CISCO CCNP TROUBLESHOOTING  
Credit Hrs:  3.00  
Total Contact Hrs:  48.00  Lecture:  32.00  Lab:  16.00  Clinical:  0.00  
Other:  0.00  Fees:  98.00  
Description: 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.

Area: DAA  DANCE ACTIVITIES  
CCN: *DAA1100   Title: BEGINNING MODERN DANCE I  
Credit Hrs:  2.00  
Total Contact Hrs:  64.00  Lecture:  0.00  Lab:  64.00  Clinical:  0.00  
Other:  0.00  Fees:  0.00  
Description: Basic modern dance technique, exercises, and choreography are used to achieve physical objectives, to increase artistic self-awareness and to extend cultural enrichment. Coeducational.

CCN: *DAA1101   Title: MODERN DANCE II  
Credit Hrs:  2.00  
Total Contact Hrs:  64.00  Lecture:  0.00  Lab:  64.00  Clinical:  0.00  
Other:  0.00  Fees:  0.00  
Description: 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. Coeducational. Permission of instructor or

CCN: *DAA1501   Title: JAZZ DANCE II  
Credit Hrs:  2.00  
Total Contact Hrs:  64.00  Lecture:  0.00  Lab:  64.00  Clinical:  0.00  
Other:  0.00  Fees:  50.00  
Description: 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. Coeducational. Permission of Instructor.

CCN: *DAA1504   Title: JAZZ DANCE I  
Credit Hrs:  2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 50.00
Description: This is a course in Jazz technique. Included are warm-up, stretch and strengthening, centre exercises, and basic jazz combinations. Coeducational.
CCN: *DAA1680  Title: DANCE REPERTORY
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 50.00
Description: 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. Coeducational. May be repeated for credit.
Corequisite: Student must be enrolled in at least one BCC dance technique class.
CCN: *DAA1681  Title: DANCE REPERTORY II
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Advanced level participation determined through audition 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. Coeducational. May be repeated for credit.
CCN: *DAA2102  Title: MODERN DANCE III
Credit Hrs: 2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 49.00
Description: 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. Coeducational. May be repeated for credit.
Prerequisite: Permission of instructor or
CCN: *DAA2103  Title: CONTEMPORARY DANCE III
Credit Hrs: 2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A continuation of DAA2102 with an emphasis on advanced movement phrases and combinations necessary to perform contemporary dance repertory. Emphasis will be placed on the development of the students' style and performance quality. Coeducational. May be repeated for credit.
Prerequisite DAA2102 or permission of instructor.
CCN: *DAA2219  Title: BALLET IV
Credit Hrs: 2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of DAA2282. 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 advanced level. Co-educational. May be repeated for credit.

CCN: *DAA2220   Title: POINTE I
Credit Hrs: 4.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 50.00
Description: 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. Prerequisite: DAA2282 or permission of the instructor.

CCN: *DAA2221   Title: POINTE II
Credit Hrs: 3.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course is an intermediate 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 intermediate exercises and performance. Prerequisite: DAA2220 or permission of the instructor.

CCN: *DAA2280   Title: BALLET I
Credit Hrs: 2.00
Total Contact Hrs: 64.00   Lecture: 0.00   Lab: 64.00   Clinical: 0.00
Other: 0.00   Fees: 50.00
Description: An academic study of techniques and theoretical concepts of ballet for the performance-oriented student. Includes warm-up, barre, and centre combinations. Coeducational.

CCN: *DAA2281   Title: BALLET II
Credit Hrs: 2.00
Total Contact Hrs: 64.00   Lecture: 0.00   Lab: 64.00   Clinical: 0.00
Other: 0.00   Fees: 50.00
Description: Continuation of DAA1204. Ballet exercises and step combinations for the intermediate performance student, building on basic skills and culminating in a live performance. Coeducational. Participation in semester dance concert required. Prerequisite: Instructor permission or

CCN: *DAA2282   Title: BALLET III
Credit Hrs: 2.00
Total Contact Hrs: 64.00   Lecture: 0.00   Lab: 64.00   Clinical: 0.00
Other: 0.00   Fees: 50.00
Description: 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. Students are required to audition for BCC student dance ensemble. Coeducational. May be repeated for credit.
Permission of Instructor or

CCN: *DAA2610  Title: DANCE COMPOSITION
Credit Hrs:  2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other:  0.00  Fees: 50.00
Description: 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. Prerequisite: DAA1100 or DAA2280.

CCN: *DAA2905  Title: INDEPENDENT STUDY
Credit Hrs:  3.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: *DAA2907  Title: INDEPENDENT STUDY II
Credit Hrs:  3.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: Advanced individual dance study under the direction of a faculty member. Topics may vary and are usually selected on an individual basis. The course is variable credit and is repeatable for credit. Pre-requisite: DAA2905 or instructor approval.

CCN: *DAA2930  Title: SPECIAL TOPICS IN DANCE
Credit Hrs:  0.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: An instructional course concerned with activity and development of dance movement skills and concepts centered around topics of current interested 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).

CCN: *DAA2931  Title: SPECIAL TOPICS IN DANCE II
Credit Hrs:  0.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: An instructional course concerned with activity and development of dance movement skills and concepts centered around topics of current interested 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.

Area: HUM  HUMANITIES TRAVEL STUDY
CCN: *DAN2100  Title: DANCE APPRECIATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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. Students encounter the basic content and methodology of the principle areas of knowledge through an examination of dance and its related systems and structures. There is no movement required in this course. DAN2100 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. DAN2100 meets the International/Intercultural competency requirement.

Area: DAA  DANCE ACTIVITIES
CCN: *DAN2600  Title: MUSIC FOR DANCE
Credit Hrs:  2.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.

Area: DEA  DENTAL ASSISTING
CCN: DEA1000  Title: INTRODUCTION T DENTAL PRACTICE/ASSISTING
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.

CCN: DEA1030  Title: PRE CLINICAL
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.

CCN: DEA1030L  Title: PRECLINICAL LABORATORY
Credit Hrs:  2.00
Total Contact Hrs: 120.00  Lecture: 0.00  Lab: 120.00  Clinical: 0.00
Other:  0.00    Fees:  133.90
Description: Laboratory/clinical portion of DEA1030. Provides
hands-on instruction of use and sterilization of all instruments and equipment used in the practice of dentistry.

CCN: DEA1131    Title: ALLIED DENTAL THEORY
Credit Hrs:   2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: DEA1155    Title: DENTAL PSYCHOLOGY
Credit Hrs:   2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: DEA1936    Title: DENTAL SEMINAR
Credit Hrs:   1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: DEA1940L   Title: CLINICAL PRACTICE I
Credit Hrs:   2.00
Total Contact Hrs: 120.00  Lecture: 0.00  Lab: 120.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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 keep a journal which they will turn into the dental assisting lead instructor.

CCN: DEA1941L   Title: CLINICAL PRACTICE II  
Credit Hrs: 3.00  
Total Contact Hrs: 180.00  
Lecture: 0.00  
Lab: 0.00  
Clinical: 180.00  
Other: 0.00  
Fees: 0.00  
Description: 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 office 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 student on a regular basis. Students are expected to keep track of their hours and keep a journal which they will turn into the dental assisting lead instructor. Students must have completed all Dental Assisting course work prior to enrolling in this course.

Area: DEH  DENTAL HYGIENE  
CCN: DEH1002    Title: CLINICAL DENTAL HYGIENE PROCEDURES  
Credit Hrs: 2.00  
Total Contact Hrs: 32.00  
Lecture: 32.00  
Lab: 0.00  
Clinical: 0.00  
Other: 0.00  
Fees: 0.00  
Description: 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.

CCN: DEH1002L   Title: PRECLINICAL DENTAL HYGIENE LAB  
Credit Hrs: 2.00  
Total Contact Hrs: 96.00  
Lecture: 0.00  
Lab: 96.00  
Clinical: 0.00  
Other: 0.00  
Fees: 145.90  
Description: 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.

CCN: DEH1130    Title: ORAL HISTOLOGY AND EMBRYOLOGY  
Credit Hrs: 2.00  
Total Contact Hrs: 32.00  
Lecture: 32.00  
Lab: 0.00  
Clinical: 0.00  
Other: 0.00  
Fees: 0.00  
Description: 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.

CCN: DEH1602    Title: PERIODONTOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course presents the etiology and classification of periodontal disease and principles of periodontia pertinent to dental hygiene practice. Principles of occlusion and periodontal surgery techniques are discussed through the use of case presentations.

CCN: DEH1602L    Title: PERIODONTOLOGY LAB
Credit Hrs: 1.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 165.90
Description: DEH1602L 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.

CCN: DEH1800    Title: DENTAL HYGIENE I
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: DEH1800L    Title: DENTAL HYGIENE I CLINIC
Credit Hrs: 2.00
Total Contact Hrs: 128.00  Lecture: 0.00  Lab: 0.00  Clinical: 128.00
Other: 0.00  Fees: 168.90
Description: This course will provide clinical experience in comprehensive patient care. Emphasis is placed on treatment planning and dental hygiene assessment techniques.

CCN: DEH1802    Title: DENTAL HYGIENE II
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: DEH1802L    Title: DENTAL HYGIENE II CLINIC
Credit Hrs: 4.00
Total Contact Hrs: 192.00  Lecture: 0.00  Lab: 0.00  Clinical: 192.00
Other: 0.00  Fees: 198.90
Description: This course will provide clinical experience in treatment planning, periodontal charting, ultrasonic scaling and comprehensive dental care.
<table>
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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Hrs</th>
<th>Total Contact Hrs</th>
<th>Lecture Hrs</th>
<th>Lab Hrs</th>
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<td>DENTAL HYGIENE REVIEW SEMINAR</td>
<td>1.00</td>
<td>16.00</td>
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<td>DEH2400</td>
<td>GENERAL AND ORAL PATHOLOGY</td>
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<td>DEH2804</td>
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Description:
- **Dental Hygiene**: Focuses on effective hygiene care.
  - CCN: DEH1934
  - Title: DENTAL HYGIENE REVIEW SEMINAR
  - Credit Hrs: 1.00
  - Total Contact Hrs: 16.00
  - Lecture: 16.00
  - Lab: 0.00
  - Clinical: 0.00
  - Other: 0.00
  - Fees: 0.00
  - Description: Dental Hygiene course centering around National Board of Dental Hygiene Examination Review.

- **Pharmacology**: Understands drugs commonly encountered in the dental office.
  - CCN: DEH2300
  - Title: DENTAL PHARMACOLOGY
  - Credit Hrs: 2.00
  - Total Contact Hrs: 32.00
  - Lecture: 32.00
  - Lab: 0.00
  - Clinical: 0.00
  - Other: 0.00
  - Fees: 0.00
  - Description: 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.

- **Pathology**: Focuses on general and oral pathology.
  - CCN: DEH2400
  - Title: GENERAL AND ORAL PATHOLOGY
  - Credit Hrs: 2.00
  - Total Contact Hrs: 32.00
  - Lecture: 32.00
  - Lab: 0.00
  - Clinical: 0.00
  - Other: 0.00
  - Fees: 0.00
  - Description: 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.

- **Community Health**: Teaches concepts of community dental health.
  - CCN: DEH2701C
  - Title: COMMUNITY DENTAL HEALTH
  - Credit Hrs: 2.00
  - Total Contact Hrs: 44.00
  - Lecture: 32.00
  - Lab: 12.00
  - Clinical: 0.00
  - Other: 0.00
  - Fees: 0.00
  - Description: 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.

- **Community Health Lab**: Follows through the course.
  - CCN: DEH2701L
  - Title: COMMUNITY DENTAL HEALTH LAB
  - Credit Hrs: 1.00
  - Total Contact Hrs: 48.00
  - Lecture: 0.00
  - Lab: 48.00
  - Clinical: 0.00
  - Other: 0.00
  - Fees: 12.90
  - Description: 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.

- **Dental Hygiene III**: Discusses clinical activities.
  - CCN: DEH2804
  - Title: DENTAL HYGIENE III
  - Credit Hrs: 1.00
  - Total Contact Hrs: 16.00
  - Lecture: 16.00
  - Lab: 0.00
  - Clinical: 0.00
  - Other: 0.00
  - Fees: 0.00
  - Description: 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.
CCN: DEH2804L   Title: DENTAL HYGIENE III CLINIC
Credit Hrs:   4.00
Total Contact Hrs: 192.00  Lecture: 0.00   Lab: 0.00    Clinical: 192.00
Other: 0.00    Fees: 195.90
Description: 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.

CCN: DEH2806   Title: DENTAL HYGIENE IV
Credit Hrs:   1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: DEH2806L   Title: DENTAL HYGIENE IV CLINIC
Credit Hrs:   4.00
Total Contact Hrs: 192.00  Lecture: 0.00   Lab: 0.00    Clinical: 192.00
Other: 0.00    Fees: 147.90
Description: 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.

CCN: DEH2840L   Title: ADVANCED DENTAL TECHNOLOGY LAB
Credit Hrs:   1.00
Total Contact Hrs: 48.00  Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00    Fees: 114.90
Description: 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 software programs assuring their future success.

Area: PSY  PSYCHOLOGY

CCN: *DEP2002   Title: DEVELOPMENTAL PSYCHOLOGY I: CHILD PSYCHOLOGY
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. DEP2002 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the
Gordon Rule for writing. DEP2002 meets the International/Intercultural competency requirement.

CCN: *DEP2004   Title: DEVELOPMENTAL PSYCHOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. DEP2004 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. DEP2004 meets the International/Intercultural competency requirement.

CCN: *DEP2302   Title: DEVELOPMENTAL PSYCH II: ADOLESCENT & YOUNG ADULT
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: The physical, cognitive, and socioemotional aspects of adolescence are reviewed in this course. A focus is placed upon the research dealing with the characteristic adjustments and problems of this life stage. DEP2302 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. DEP2302 meets the International/Intercultural competency requirement.

Area: DEA  DENTAL ASSISTING
CCN: DES1020    Title: DENTAL ANATOMY AND PHYSIOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: The study of head and neck anatomy with emphasis placed on the structure, morphology, and function of the primary and permanent human dentition.

Area: DEH  DENTAL HYGIENE
CCN: DES1054    Title: PAIN CONTROL AND DENTAL ANESTHESIA
Credit Hrs: 2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course provides a study of agents used in dentistry for local anesthesia and pain control.

Area: DEA  DENTAL ASSISTING
CCN: DES1100    Title: DENTAL MATERIALS
Credit Hrs: 2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: DES1100L   Title: DENTAL MATERIALS LAB (ATD)
Credit Hrs:   1.00
Total Contact Hrs: 60.00   Lecture: 0.00   Lab: 60.00   Clinical: 0.00
Other: 0.00   Fees: 150.90
Description: 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.
Area: DA   DENTAL ASSISTING
CCN: DES1200    Title: DENTAL RADIOGRAPHY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: DEA  DENTAL ASSISTING
CCN: DES1200L   Title: DENTAL RADIOGRAPHY LAB
Credit Hrs:   1.00
Total Contact Hrs: 60.00   Lecture: 0.00   Lab: 60.00   Clinical: 0.00
Other: 0.00   Fees: 157.90
Description: Laboratory portion of DES1200. Proper techniques for exposing, processing, and mounting radiographs. Laboratory exercise demonstrating proficiency in these techniques will be required.
Area: DA   DENTAL ASSISTING
CCN: DES1404    Title: BASIC ANATOMY AND PHYSIOLOGY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: DES1502    Title: DENTAL OFFICE MANAGEMENT
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: DEA  DENTAL ASSISTING
CCN: DES1805  Title: CLINICAL PROCEDURES I  
Credit Hrs: 2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Lecture series acquaints the student with the necessary background material and assisting procedures involved in each dental specialty.

CCN: DES1805L  Title: CLINICAL PROCEDURES I LAB  
Credit Hrs: 1.00  
Total Contact Hrs: 60.00  Lecture: 0.00  Lab: 0.00  Clinical: 60.00  
Other: 0.00  Fees: 68.90  
Description: Practicum phase provides the opportunity for each student to receive closely supervised individual instruction in all phases of chairside assisting. Special fee charged.

Area: DA  DENTAL ASSISTING

CCN: DES1832  Title: EXPANDED FUNCTIONS I  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: DES1832L  Title: EXPANDED FUNCTION I LABORATORY  
Credit Hrs: 1.00  
Total Contact Hrs: 60.00  Lecture: 0.00  Lab: 60.00  Clinical: 0.00  
Other: 0.00  Fees: 128.90  
Description: 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.

Area: DEA  DENTAL ASSISTING

CCN: DES1833  Title: EXPANDED FUNCTIONS II  
Credit Hrs: 2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: DES1833L  Title: EXPANDED FUNCTION II LAB  
Credit Hrs: 1.00  
Total Contact Hrs: 60.00  Lecture: 0.00  Lab: 60.00  Clinical: 0.00  
Other: 0.00  Fees: 138.90  
Description: 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.

Area: DA  DENTAL ASSISTING
CCN: DES1840C  Title: PREVENTIVE DENTISTRY  
Credit Hrs:  2.00  
Total Contact Hrs:  48.00  Lecture:  32.00  Lab:  16.00  Clinical:  0.00  
Other:  0.00  Fees:  49.00  
Description: 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.

Area: CCJ CRIMINAL JUSTICE

CCN: *DSC1002  Title: TERRORISM AND DOMESTIC SECURITY  
Credit Hrs:  3.00  
Total Contact Hrs:  48.00  Lecture:  48.00  Lab:  0.00  Clinical:  0.00  
Other:  0.00  Fees:  0.00  
Description: 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.

CCN: *DSC1006  Title: INTRODUCTION TO HOMELAND SECURITY  
Credit Hrs:  3.00  
Total Contact Hrs:  48.00  Lecture:  48.00  Lab:  0.00  Clinical:  0.00  
Other:  0.00  Fees:  0.00  
Description: 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.

CCN: *DSC2242  Title: TRANSPORTATION & BORDER SECURITY  
Credit Hrs:  3.00  
Total Contact Hrs:  48.00  Lecture:  48.00  Lab:  0.00  Clinical:  0.00  
Other:  0.00  Fees:  0.00  
Description: 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.

CCN: *DSC2590  Title: INTELLIGENCE ANALYSIS & SECURITY  
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: ESL  ENGLISH FOR ACADEMIC PURPOSES
CCN: EAP0100C Title: LISTENING/SPEAKING I
Credit Hrs: 3.00
Total Contact Hrs: 61.00  Lecture: 48.00  Lab: 13.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: EAP0120C Title: ESL READING I
Credit Hrs: 3.00
Total Contact Hrs: 61.00  Lecture: 48.00  Lab: 13.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Placement in EAP0120C is determined by assessment tests and/or referral. Students must earn a "C" or higher to proceed to EAP0220C.

CCN: EAP0185C Title: ESL GRAMMAR/WRITING I
Credit Hrs: 6.00
Total Contact Hrs: 109.00  Lecture: 96.00  Lab: 13.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. The requirement to move to the next level (EAP0285C) is a C or higher. With a D or F, a student must repeat EAP0185C. PREREQUISITE: Through placement testing and/or department recommendation.

CCN: EAP0200C Title: LISTENING/SPEAKING II
Credit Hrs: 3.00
Description: EAP0200C 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.

CCN: EAP0220C  Title: ESL READING II  Credit Hrs: 3.00
Description: 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. Placement in EAP0220C is determined by successful completion of EAP0120C (a grade of "C" or higher) or assessment tests and/or departmental recommendation. Students must earn a "C" or higher to proceed to EAP0320C.

CCN: EAP0281C  Title: ENGLISH FOR ACADEMIC PURPOSES COMBINED SKILLS  Credit Hrs: 9.00
Description: In this high-beginning combined skills course for speakers of other languages, students will develop English grammar, writing, reading, speaking, listening, and vocabulary skills. Students will develop academic language skills in the context of guided discourse with an emphasis on logical thought. The requirement to move to the next level is a C or higher. With a D or F, a student must repeat EAP0281C. PREREQUISITE: Placement by entrance score and/or department recommendation.

CCN: EAP0285C  Title: ESL GRAMMAR/Writing II  Credit Hrs: 6.00
Description: 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. The requirement to move to the next level (EAP0385C) is a C or higher. With a D or F, a student must repeat EAP0285C. PREREQUISITE: Placement by entrance score and/or department recommendation.

CCN: EAP0300C  Title: LISTENING/SPEAKING III  Credit Hrs: 3.00
Total Contact Hrs: 61.00  Lecture: 48.00  Lab: 13.00  Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.

CCN: EAP0320C   Title: ESL READING III
Credit Hrs:   3.00
Total Contact Hrs: 61.00  Lecture: 48.00  Lab: 13.00  Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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. Placement in EAP0320C is determined by successful completion of EAP0220C (a grade of C or higher) or assessment tests and/or departmental recommendation. Students must earn at least a C to pass the course and proceed to EAP0420C

CCN: EAP0385C   Title: ESL GRAMMAR/WRITING III
Credit Hrs:   6.00
Total Contact Hrs: 109.00  Lecture: 96.00  Lab: 13.00  Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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. The requirement to move to the next level (EAP0485C) is a C or higher. With a D or F, a student must repeat EAP0385C.

CCN: EAP0400C   Title: LISTENING/SPEAKING IV
Credit Hrs:   3.00
Total Contact Hrs: 61.00  Lecture: 48.00  Lab: 13.00  Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.

CCN: EAP0420C   Title: ESL READING IV
Credit Hrs:   3.00
Total Contact Hrs: 61.00  Lecture: 48.00  Lab: 13.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This is a high-intermediate ESL reading course designed for students in English for Academic Purposes (EAP) programs. It emphasizes vocabulary and comprehension at a high-intermediate level. Placement in EAP0420C is determined by successful completion of EAP0320C (a grade of "C" or higher) or assessment tests and/or referral. Students must earn a "C" or higher to pass the course and take the reading section of the PERT for further Reading placement.

CCN: EAP0485C Title: ESL GRAMMAR/WRITING IV
Credit Hrs: 6.00
Total Contact Hrs: 109.00 Lecture: 96.00 Lab: 13.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: 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. The requirement to move to the next level (EAP1540C) is a "C" or higher. With a "D" or an "F", a student must repeat EAP0485C.

CCN: *EAP1520C Title: ADVANCED READING
Credit Hrs: 3.00
Total Contact Hrs: 61.00 Lecture: 48.00 Lab: 13.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: 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.

Area: CE23 ESOL COLLEGE PREP
CCN: *EAP1540C Title: ESL ADVANCED COMPOSITION I
Credit Hrs: 3.00
Total Contact Hrs: 61.00 Lecture: 48.00 Lab: 13.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: A composition course in English for speakers of other languages. Designed principally to guide the student to the mastery of paragraph structure using various paragraph modes and the multi-paragraph essay. The grammar focuses on elements which closely tie in with composition, e.g. connectors and sentence combining. With a D or an F, a student must repeat EAP1540C. Special fee is charged.

Area: ESL ENGLISH FOR ACADEMIC PURPOSES
CCN: *EAP1640C Title: ESL ADVANCED COMPOSITION II
Credit Hrs: 3.00
Total Contact Hrs: 61.00   Lecture: 48.00   Lab: 13.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This is an advanced composition course in English for speakers of other languages. Students compose essays in various rhetorical modes. Emphasis is placed on the writing process and the development of clear and logical ideas. Students apply advanced grammar and academic vocabulary skills. With a D or an F, a student must repeat EAP1640C.

Area: ECO  ECONOMICS
CCN: *ECO2013   Title: PRINCIPLES OF MACROECONOMICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: An introductory course in macroeconomic principles covering basic economic problems and concepts. Topics discussed and analyzed include basic economic problems of unemployment, inflation, and economic growth, 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. ECO2013 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ECO2013 meets the International/Intercultural competency requirement.

Area: BUS  BUSINESS
CCN: *ECO2220   Title: MONEY AND BANKING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: ECO  ECONOMICS
CCN: *ECO3703   Title: INTERNATIONAL ECONOMICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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.

CCN: *ECS2390  Title: THE ECONOMY OF SPAIN
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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.

Area: EDF  EDUCATION: FOUNDATION & POLICY

CCN: *EDF1005  Title: INTRODUCTION TO THE TEACHING PROFESSION
Credit Hrs: 3.00
Total Contact Hrs: 63.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 15.00  Fees: 4.75
Description: 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. The course has a mandatory 15 hour field experience component which is to be completed in an educational or alternative setting.

CCN: *EDF2070  Title: PERSPECTIVES IN EDUCATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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.

CCN: *EDF2085  Title: INTRO TO DIVERSITY & EXCEPTIONALITIES FOR EDU
Credit Hrs: 3.00
Total Contact Hrs: 63.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 15.00  Fees: 4.75
Description: Designed for the prospective educator, this course 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 Florida Educator Accomplished Practices (FEAPs) and Florida Standards. A minimum
15-hour field experience is required in an educational or alternative setting.

Area: EDU  EDUCATION
CCN: *EDF3280  Title: INSTRUCTIONAL STRATEGIES
Credit Hrs:  3.00
Total Contact Hrs: 58.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 10.00  Fees: 4.75
Description: 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.

CCN: *EDF4430  Title: EDUCATIONAL TESTS AND MEASUREMENTS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 4.75
Description: 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 using traditional and alternative assessment strategies. Topics include measurement, formative and summative assessment strategies, test construction, performance assessments, interpreting data from state and standardized achievement tests, and the accommodation of diverse learners.

CCN: *EDF4930  Title: SPECIAL TOPICS IN TEACHER EDUCATION
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course focuses on current and emerging issues in teacher education. Its format and topic will vary by semester.

Area: EDG  EDUCATION
CCN: *EDG1006  Title: FLORIDA TEACHER CERTIFICATION EXAM PROCESS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course introduces Education students to the Florida Teacher Certification Exam and process.

Area: COE  COOPERATIVE EDUCATION
CCN: *EDG2949  Title: CO OP WORK EXPERIENCE
Credit Hrs:  3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: A course designed to provide training in a students 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. All students must contact the Cooperative Education Office to obtain registration approval.

Area: EDU  EDUCATION
CCN: *EDG4410  Title: CLASSROOM MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 58.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 10.00  Fees: 4.75
Description: 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.

Area: EDF  EDUCATION: FOUNDATION & POLICY
CCN: *EDP2002  Title: INTRODUCTION TO EDUCATIONAL PSYCHOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: EDU  EDUCATION
CCN: *EDP4004  Title: PRINCIPLES OF EDUCATIONAL PSYCHOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: EDF  EDUCATION: FOUNDATION & POLICY
CCN: *EEC1200  Title: EARLY CHILDHOOD EDUCATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *EEC1603  Title: CHILD GUIDANCE
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course provides child guidance and group management techniques to foster the development of self-esteem, self-control, and social skills in young children.

Area: ETE  ENGINEERING TECHNOLOGY

CCN: *EET1015C  Title: DC CIRCUITS

Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 29.00

Description: 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.

CCN: *EET1025C  Title: AC CIRCUITS

Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: *EET1084C  Title: INTRODUCTION TO ELECTRONICS

Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: *EET1141C  Title: LINEAR TECHNIQUES I

Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: *EET2142C  Title: LINEAR TECHNIQUES II

Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 5.00
Description: This is the second course covering advance semiconductor 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.

CCN: *EET2326C  Title: ELECTRONIC COMMUNICATIONS  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 5.00

Description: 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.

CCN: *EET2355C  Title: DATA COMMUNICATIONS  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00

Description: 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 include UART and MODEM implementation.

CCN: *EET2358C  Title: ADVANCED COMMUNICATION TECHNOLOGY  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00

Description: 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.

Area: EDU  EDUCATION

CCN: *EEX3011  Title: INTRODUCTION TO EXCEPTIONAL STUDENT EDUCATION  
Credit Hrs: 3.00  
Total Contact Hrs: 58.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 10.00  Fees: 4.75

Description: 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.

CCN: *EEX3094  Title: NATURE & NEEDS OF THE AUTISM SPECTRUM DISORDER STD  
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 4.75

Description: 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.

CCN: *EEX3280 Title: TRANSITION PLANNING FOR STUDENTS WITH DISABILITIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: 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 be 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 the transition process from school to post school will be covered.

CCN: *EEX3601 Title: POSITIVE BEHAVIORAL SUPPORT
Credit Hrs: 3.00
Total Contact Hrs: 58.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 10.00 Fees: 4.75

Description: 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. Students will complete 10 hours of school-based field experience in an ESE or inclusive K12 setting. These hours are beyond the required 48 classroom contact hours.

CCN: *EEX4293 Title: ASSESSMENT & STRATEGIES IN EXCEPTIONAL STUDENT ED
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: 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.

CCN: *EEX4472  Title: INSTRUCTIONAL PRACTICES FOR STUDENTS WITH
Credit Hrs: 3.00
Total Contact Hrs: 58.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 10.00  Fees: 0.00
Description: 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.

CCN: *EEX4486  Title: DIFFERENTIATED INSTRUCTION FOR STUDENTS WITH
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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
on a from proactive through intervention
strategies.

CCN: *EEX4843  Title: TEACHING EXCEPTIONAL LEARNERS PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 108.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 60.00  Fees: 4.75
Description: 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 will complete a minimum of 60
hours of school-based field experience in the
K12 setting working with students with
disabilities under the supervision of an ESE
teacher. These hours are beyond the required
48 classroom contact hours.

CCN: *EEX4945  Title: STUDENT TEACHING INTERNSHIP IN ESE
Credit Hrs: 9.00
Total Contact Hrs: 574.50  Lecture: 12.00   Lab: 0.00   Clinical: 0.00  
Other: 562.50  Fees: 4.75

Description: 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 this 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.

Area: EGN  ENGINEERING: GENERAL  
CCN: *EGS1001  Title: INTRODUCTION TO ENGINEERING  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00   Lab: 0.00   Clinical: 0.00   
Other: 0.00  Fees: 0.00

Description: 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.

Area: COE  COOPERATIVE EDUCATION  
CCN: *EGS2949  Title: CO OP WORK EXPERIENCE  
Credit Hrs: 3.00  
Total Contact Hrs: 144.00  Lecture: 0.00   Lab: 0.00   Clinical: 0.00  
Other: 144.00  Fees: 0.00

Description: 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. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration.

Area: EDF  EDUCATION: FOUNDATION & POLICY  
CCN: *EME2040  Title: INTRODUCTION TO EDUCATIONAL TECHNOLOGY  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00   Lab: 0.00   Clinical: 0.00  
Other: 0.00  Fees: 0.00

Description: This course is a theory and application course that introduces students to instructional design principles, traditional and emerging technologies, and software and how they are used in the teaching profession. Students will be provided an overview of the Florida Educator Accomplished Practices, Sunshine State Standards, and the Professional Educator Competencies.

Area: EDU  EDUCATION
CCN: *EME2041  Title: EDUCATIONAL TECHNOLOGY INTEGRATION IN EVERYDAY
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: *EME3410  Title: ENHANCING MATHEMATICS AND SCIENCE EDUCATION WITH 
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00 
Description: 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.

Area: EMT  EMERGENCY MEDICAL TECH 
CCN: EMS1011  Title: INTRODUCTION TO EMERGENCY MEDICAL SERVICES 
Credit Hrs:  1.00  
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 5.25
Description: Introduction to Emergency Medical services as a 
career. The course will describe roles and 
responsibilities, career and advancement 
opportunities. The course will also highlight the 
required skills in; math, reading and studying. 
Also highlighted is basic anatomy and medical 
terminology.

CCN: EMS1119  Title: EMERGENCY MEDICAL TECHNICIAN BASIC 
Credit Hrs:  6.00  
Total Contact Hrs: 96.00  Lecture: 96.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 5.25  
Description: 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.

CCN: EMS1119L  Title: EMERGENCY MEDICAL TECHNICIAN SKILLS LABORATORY 
Credit Hrs:  1.00  
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 30.00  
Description: 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, and basic extrication.

CCN: EMS1411  Title: EMT HOSPITAL CLINICAL
Credit Hrs: 2.00
Total Contact Hrs: 80.00  Lecture: 0.00  Lab: 0.00  Clinical: 80.00
Other: 0.00  Fees: 12.90
Description: 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.

CCN: EMS1421  Title: EMERGENCY MEDICAL TECHNICIAN (EMT) FIELD CLINICAL
Credit Hrs: 2.00
Total Contact Hrs: 80.00  Lecture: 0.00  Lab: 0.00  Clinical: 80.00
Other: 0.00  Fees: 12.90
Description: 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.

CCN: EMS2010  Title: PARAMEDIC 1 A&P, ASSESS, PATHO, PHARM
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

CCN: EMS2201  Title: PARAMEDIC 1 HOSPITAL CLINICAL
Credit Hrs: 1.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 48.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: EMS2311  Title: EMT LEADERSHIP
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 5.25
Description: Introduces the student to professional issues in EMS through special projects. Prerequisite: EMT and paramedic certificate courses.

CCN: EMS2631  Title: PARAMEDIC PREP 1
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 5.25

CCN: EMS2631L  Title: PARAMEDIC SCIENCE I LAB
Credit Hrs:  1.00
Total Contact Hrs: 40.00  Lecture: 0.00  Lab: 40.00  Clinical: 0.00
Other: 0.00  Fees: 79.00
Description: This Lab (EMS2631L) supports the psychomotor skills associated with the lecture content from the Paramedic 1 Lectures, EMS2010, and EMS2631. It also reviews EMT skills, and introduces EMS equipment used throughout all levels of Paramedic training. Topics include: (1) Patient Assessment, (2) Medication Administration, (3) Workforce Safety and Wellness, (4) Documentation, (5) Transport Operations, and (6) Cardiac monitor-defibrillator checkout, basic EKG electrodes placement, 12-Lead EKG electrode placement, and Defib/Synch/Pace Patch placement.

CCN: EMS2632  Title: PARAMEDIC 2 SCIENCE
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course follows the Nation EMS Education Standard Competencies utilizing the American Academy of Orthopedic Surgeons (AAOS) 8th Edition, covering: (1) Airway Management, (2) Respiratory Emergencies, (3) Obstetrics, (4) Neonatal Care, (5) Infectious Diseases, (6) Toxicology, and (7) Patients with Special Challenges.

CCN: EMS2632L  Title: PARAMEDIC 2 LAB
Credit Hrs:  1.00
Total Contact Hrs: 40.00  Lecture: 0.00  Lab: 40.00  Clinical: 0.00
Other: 0.00  Fees: 79.00
Description: The Paramedic 2 Lab (EMS2632L) consists of skills associated with the Paramedic 2 lectures (EMS2632 and EMS2633), and builds upon prior knowledge and skills from previous levels of EMS training. Skills considered "review" may be evaluated and
signed off in and associated P2 Lab Seminar.
Topics Include: (1) Airway, (2) Respiratory, (3) Obstetrics, (4) Neonatal Care, (5) Patients with Special Challenges, (6) Cardiology, (7) Responding to the Field Code, (8) Management and Resuscitation of the Critical Patient, (9) Infectious Diseases, and (10) Toxicology. Topics (11) Patient Assessment, and (12) Documentation are on-going skills that are constantly being evaluated and improved.

CCN: EMS2633  Title: PARAMEDIC 2 CARDIOLOGY
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 5.25
Description: This course follows the Nation EMS Education Standard Competencies utilizing the American Academy of Orthopedic Surgeons (AAOS) 8th Edition, covering: (1) Cardiology, (2) Associated Materials from independent textbooks supporting Basic EKGs, 12-Lead EKGs, and Advanced Cardiac Life Support (ACLS), (3) Responding to the Field Code, and (4) Management and Resuscitation of the Critical Patient.

CCN: EMS2634  Title: PARAMEDIC 3 - TRAUMA
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 5.25

CCN: EMS2634L  Title: PARAMEDIC SCIENCE III - TRAUMA LAB
Credit Hrs: 1.00
Total Contact Hrs: 40.00  Lecture: 0.00  Lab: 40.00  Clinical: 0.00
Other: 0.00  Fees: 79.00
Additional Seminar time may be needed to accomplish these course objectives.

CCN: EMS2635    Title: PARAMEDIC 3 - MEDICAL
Credit Hrs: 4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 5.25

CCN: EMS2636    Title: PARAMEDIC 4 SCIENCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 5.25
Description: 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, 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 are continued throughout Paramedic education. Course content includes current National EMS Education Standard Competencies.

CCN: EMS2636L   Title: PARAMEDIC SCIENCE IV_LAB.
Credit Hrs: 2.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Final skills lab 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.

CCN: EMS2641    Title: PARAMEDIC II HOSPITAL CLINICAL
Credit Hrs: 2.00
Total Contact Hrs: 80.00   Lecture: 16.00   Lab: 0.00   Clinical: 64.00
Other: 0.00   Fees: 12.90
Description: 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.

CCN: EMS2642   Title: PARAMEDIC 3 - HOSPITAL CLINICAL
Credit Hrs: 2.00
Total Contact Hrs: 80.00   Lecture: 16.00   Lab: 0.00   Clinical: 64.00
Other: 0.00    Fees: 12.90
Description: 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.

CCN: EMS2643   Title: PARAMEDIC 4 - HOSPITAL CLINICAL
Credit Hrs: 2.00
Total Contact Hrs: 80.00   Lecture: 0.00   Lab: 0.00   Clinical: 80.00
Other: 0.00    Fees: 12.90
Description: The 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 skills competencies on web based computer system is required. Health and Liability Insurance is required.

CCN: EMS2650   Title: PARAMEDIC SCIENCE I FIELD
Credit Hrs: 2.00
Total Contact Hrs: 88.00   Lecture: 16.00   Lab: 0.00   Clinical: 72.00
Other: 0.00    Fees: 12.90
Description: 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.

CCN: EMS2651  Title: PARAMEDIC SCIENCE II FIELD
Credit Hrs: 2.00
Total Contact Hrs: 88.00  Lecture: 16.00  Lab: 0.00  Clinical: 72.00
Other: 0.00  Fees: 12.90
Description: Second of four field courses that provides continued application of knowledge and skills previously learned for directed, supervised experiences on EMS Advanced Life Support (ALS) vehicles. 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) Infectious Diseases, (8) Toxicology, (9) Patient Assessment (a continuous learning skill), (10) Documentation (a continuous learning skill), and (11) Transport Operations. Additional Seminar Time may be needed to achieve all these objectives.

CCN: EMS2652  Title: PARAMEDIC 3 FIELD CLINICAL
Credit Hrs: 2.00
Total Contact Hrs: 88.00  Lecture: 16.00  Lab: 0.00  Clinical: 72.00
Other: 0.00  Fees: 12.90

CCN: EMS2653  Title: PARAMEDIC 4 CAPSTONE FIELD INTERNSHIP
Credit Hrs: 4.00
Total Contact Hrs: 204.00  Lecture: 0.00  Lab: 0.00  Clinical: 204.00
Other: 0.00  Fees: 0.00
Description: The Paramedic Field Internship is the Capstone course of the paramedic program. Interns will participate as lead crew members aboard a licensed advanced life support transport vehicle with an assigned preceptor. During their field internship, each student will provide evidence they have achieved entry-level competence.

CCN: *EMS3312  Title: EMS SUPERVISOR
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This is an upper level course to provide students an introduction of practices and principles to create and maintain a successful EMS organization. The course will explore issues in Managerial leadership, team building, quality improvement, strategic planning, customer service and crisis management.
CCN: *EMS4314  Title: EMERGENCY SERVICES ADMINISTRATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course is to comply with Fire and Emergency Services Higher education (FESHE) program. The student will able apply theory to community administration, community risk reduction, human resource management and planning for the emergency services organizations.
CCN: *EMS4334  Title: COMMUNITY RISK REDUCTION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course is to comply with Fire and Emergency Services Higher education (FESHE) program and provides a theoretical framework for the understanding of the ethical, sociological, organizational, political, and legal components of community risk reduction, and a methodology for the development of a comprehensive community risk reduction plan.
Area: ENC  ENGLISH COMPOSITION
CCN: ENC0015C  Title: DEVELOPMENTAL WRITING I
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 22.00
Description: This course provides an overview of the fundamentals of grammar, mechanics, usage, sentence structure, and paragraph development. A laboratory component will supplement classroom instruction. With a D or an F, a student must repeat the course. Credit for this course may not be used to meet degree requirements.
CCN: ENC0017C  Title: ACCELERATED LITERACY READING/Writing INTEGRATION
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: ENC0025C  Title: DEVELOPMENTAL WRITING II
Credit Hrs: 4.00
Total Contact Hrs: 64.00   Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 22.00
Description: 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. With a D or an F, a student must repeat the course. Credit for this course may not be used to meet degree requirements.
CCN: *ENC1101   Title: COMPOSITION I
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 22.00
Description: 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 argumentation. Students will also develop research skills and learn to incorporate research material through the writing process. ENC1101 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.
CCN: *ENC1102   Title: COMPOSITION II
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 student's 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. ENC1102 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.
CCN: *ENC2210   Title: PROFESSIONAL AND TECHNICAL WRITING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: LIT   LITERATURE
CCN: *ENG2101  Title: THE FILM AS LITERATURE  
Credit Hrs:   3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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. ENG2101 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ENG2101 meets the International/Intercultural competency requirement.

CCN: *ENL2012  Title: BRITISH LITERATURE TO 1798  
Credit Hrs:   3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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. ENL2012 is a writing credit course. Students must earn a minimum grade of C to meet the requirements for the Gordon Rule for writing. ENL2012 meets the International/Intercultural competency requirement.

CCN: *ENL2022  Title: BRITISH LITERATURE SINCE 1798  
Credit Hrs:   3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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. ENL2022 is a writing course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ENL2022 meets the International/Intercultural competency requirement.

Area: ENL  ENGLISH LITERATURE  
CCN: *ENL2330  Title: INTRODUCTION TO SHAKESPEARE  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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 reading comprehension, critical thinking, and writing skills with regard to an iconic writer of western literature whose themes and characters have universal, contemporary relevance. ENL2330 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. ENL2330 meets the International/Intercultural competency requirement.

Area: BOT  BIOLOGICAL SCIENCE  
CCN: *ENY1001  Title: BUGS AND PEOPLE  
Credit Hrs:  3.00  
Total Contact Hrs:  48.00  
Lecture:  48.00  
Lab:  0.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: 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 and scientific advancement. Interactions with man, such as insects as international culture, international 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 international 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 Earth. ENY1101 meets the International/Intercultural competency requirement.

Area: BIO  BIOLOGY  
CCN: *ENY3005  Title: PRINCIPLES OF ENTOMOLOGY  
Credit Hrs:  2.00  
Total Contact Hrs:  48.00  
Lecture:  48.00  
Lab:  0.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: An introduction to entomology with lecture and labs on insect structure, development, classification, habits and control.

Area: BSC  BIOLOGICAL SCIENCES  
CCN: *ENY3005L  Title: PRINCIPLES OF ENTOMOLOGY LAB  
Credit Hrs:  1.00  
Total Contact Hrs:  32.00  
Lecture:  0.00  
Lab:  32.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: An introduction to entomology with lecture and labs on insect structure, development, classification, habits and control.

Area: BIO  BIOLOGY  
CCN: *ENY3222  Title: BIOLOGY AND IDENTIFICATION OF URBAN PESTS  
Credit Hrs:  3.00  
Total Contact Hrs:  48.00  
Lecture:  48.00  
Lab:  0.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: An instructional program that describes insects. Including life cycle, morphology, physiology, ecology, and taxonomy of urban pests.
Area: ENY  ENTOMOLOGY
CCN: *ENY3225  Title: PRINCIPLES OF URBAN PEST MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: BIO  BIOLOGY
CCN: *ENY3228  Title: URBAN VERTEBRATE PEST MANAGEMENT
Credit Hrs: 2.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This is a companion course designed to complement ENY-3225, 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.

CCN: *ENY4161C  Title: INSECT CLASSIFICATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Classification of major families of adult insects with emphasis on their identification, habitat and niche. A properly curated collection is required.

Area: ENY  ENTOMOLOGY
CCN: *ENY4592  Title: MOSQUITO BIOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: EVR  ENVIRONMENTAL SCIENCE
CCN: *ENY4660  Title: MEDICAL AND VETERINARY ENTOMOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 cevtor-borne diseases will also be covered.

CCN: *ENY4905  Title: REVIEW OF SCIENTIFIC LITERATURE
Credit Hrs: 0.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: A course where critical thinking is developed through the analysis and critique of scientific literature and research.
Area: AGR AGRICULTURE
CCN: *ENY4906   Title: DIRECTED ENTOMOLOGICAL RESEARCH
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 0.00   Clinical: 0.00
Other: 48.00   Fees: 0.00
Description: Students (individually or in a group) will conduct research 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 5 or more objectives as appropriate to the given student project.
CCN: *ENY4949   Title: ENTOMOLOGY INTERNSHIP
Credit Hrs: 3.00
Total Contact Hrs: 144.00   Lecture: 0.00   Lab: 0.00   Clinical: 0.00
Other: 144.00   Fees: 0.00
Description: A course designed to provide training in entomology through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer/host. Minimum clock 144 hours required for completion.
Area: EDF EDUCATION: FOUNDATION & POLICY
CCN: EPI0001   Title: CLASSROOM MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 40.00   Lecture: 40.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course provides an overview on effective classroom management in the K-12 classroom. 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.
CCN: EPI0002   Title: INSTRUCTIONAL STRATEGIES
Credit Hrs: 3.00
Total Contact Hrs: 40.00   Lecture: 40.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course prepares the participant to become proficient in the application of a variety of instructional strategies based on knowledge of learning styles, co-opetational and collaboriv groupin activities, accomodation for exceptional students, and to develop effective lesson plans that infuse technology.
CCN: EPI0003   Title: TECHNOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 40.00   Lecture: 40.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: The course is a theory and application course that
prepares students to integrate technology into the teaching and learning process. Instructional design principles, traditional and emerging technologies, software programs, Web 2.0 tools, and educational apps are emphasized in the course.

CCN: EPI0004  Title: THE TEACHING AND LEARNING PROCESS
Credit Hrs: 3.00
Total Contact Hrs: 40.00  Lecture: 40.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: EPI0010  Title: FOUNDATIONS OF RESEARCH-BASED PRACTICES IN READING
Credit Hrs: 3.00
Total Contact Hrs: 45.00  Lecture: 45.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: EPI0020  Title: THE TEACHING PROFESSION
Credit Hrs: 2.00
Total Contact Hrs: 30.00  Lecture: 30.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: EPI0030  Title: DIVERSITY IN THE CLASSROOM
Credit Hrs: 2.00
Total Contact Hrs: 30.00  Lecture: 30.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: EPI0940  Title: FIELD EXPERIENCE
Credit Hrs: 1.00
Total Contact Hrs: 30.00  Lecture: 30.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course is designed to provide the opportunity
to the student with the experience of observing, interacting and working with a school population.

CCN: EPI0945    Title: FIELD EXPERIENCE
Credit Hrs:  1.00
Total Contact Hrs: 15.00   Lecture: 15.00   Lab: 0.00   Clinical: 0.00
Other:  0.00   Fees:  0.00
Description: 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.

Area: GLY  GEOLOGY
CCN: *ESC1000    Title: EARTH SCIENCE
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other:  0.00   Fees:  0.00
Description: 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.

CCN: *ESC1000L    Title: EARTH SCIENCE LABORATORY
Credit Hrs:  1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other:  0.00   Fees:  10.00
Description: This course will have experiments and exercises that will investigate the hydrosphere, lithosphere and atmosphere of earth. The earth will also be mapped and investigated as an object in space.

Area: EDU  EDUCATION
CCN: *ESC4074    Title: WEATHER AND CLIMATE
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other:  0.00   Fees:  0.00
Description: 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 meterological and climatic studies.

Area: EGN  ENGINEERING: GENERAL
CCN: *ETD1320C    Title: BASIC CAD
Credit Hrs:  3.00
Total Contact Hrs: 64.00   Lecture: 16.00   Lab: 48.00   Clinical: 0.00
Other:  0.00   Fees:  12.00
Description: First course in computer aided design (CAD), lab
work using AutoCAD software. Topics include 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 Extra lab hours are available.

CCN: *ETD2350C  Title: ADVANCED CAD
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 16.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Covers additional topics in AutoCAD which include blocks, move and copy, array, mirror, text, text styles, 3D and isometric modes. The development of macro operations. As in basic CAD, extra lab hours are available.

Area: EDU  EDUCATION
CCN: *ETE3141  Title: COMPUTER SCIENCE EDUCATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 4.75
Description: Computer Science Education course which provides educators with the professional expertise necessary to teach the specialized content of information technology and computer science courses. Prepares entry-level technology educators for State of Florida certification in Computer Science.

Area: ETE  ENGINEERING TECHNOLOGY
CCN: *ETI1110C  Title: INTRODUCTION TO QUALITY ASSURANCE
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 product is also covered.

CCN: *ETI1420  Title: PROCESSES AND MATERIALS
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: ETI1622  Title: CONCEPTS OF LEAN AND SIX SIGMA
Credit Hrs: 4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *ETI1701   Title: SAFETY
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *ETI2535C  Title: AUTOMATED PROCESS CONTROL
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course introduces modern control theory and the use of sensors, actuators, and controllers. The student will be introduced to state of the art control systems used in industry and the elements that comprise a closed-loop network.
CCN: ETI2610C   Title: PRINCIPLES OF SIX SIGMA
Credit Hrs: 4.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: ETI2623C   Title: TOOLS FOR LEAN MANUFACTURING
Credit Hrs: 4.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *ETI2644   Title: PRODUCTION AND INVENTORY CONTROL
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Application of industrial engineering theory and practice to the area of operations management planning and control (MPC). Analysis and understanding of forecasting, aggregate planning, operations strategy, capacity planning, supply-chain management, just-in-time systems, lean manufacturing, agile manufacturing, materials requirement planning, inventory management, short-term scheduling and sequencing, line balancing, and other pertinent topics.

CCN: *ETM1010C  Title: MEASUREMENT AND INSTRUMENTATION
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 multimeters, function generators, and oscilloscopes.

CCN: *ETM2315C  Title: HYDRAULICS AND PNEUMATICS
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course is an introduction and provides students with employable skills and techniques needed to work with Fluid power systems. Principles of fluid power technology and system theory is covered in a lecture format and application of component function and circuit operation is covered using pneumatic trainers, Labs consist of a demonstration and set-up of various Pneumatic circuits detailing their placement and function in fluid power systems.

CCN: *ETP2402C  Title: INTRODUCTION TO SOLAR PHOTOVOLTAIC (PV) SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course delivers an introduction to background essential theory, principles, and future of distributive energy technology. It focuses on solar/photovoltaic systems work and integration with the electrical grid. This course is the first of a two-part series that will prepare the student for the North American Board of Certified Energy Practitioners (NABCEP) certification.

CCN: *ETP2410C  Title: INSTALLATION OF SOLAR PHOTOVOLTAIC (PV) SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00  Other: 0.00  Fees: 0.00  
**Description:** This course covers the design and installation of photovoltaic systems. It is the second course in a two-part series which provides all the content necessary to prepare the student for the North American Board of Certified Energy Practitioners (NABCEP) certification.  
CCN: *ETS1511  Title: MOTORS AND CONTROLS  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00  
**Description:** This course provides a study of the theory of operation of Direct Current (DC) and Alternating Current (AC) motors. Motor components, forces, NEMA ratings, and nameplate information are identified and defined. Inverter and Pulse Width Modulator (PWM) drives are explained, as well as AC to DC rectifiers and signal regeneration for 3-phase systems.  
CCN: *ETS2224C  Title: FIBER OPTIC COMMUNICATIONS  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00  Other: 0.00  Fees: 0.00  
**Description:** This extensive lab 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.  
CCN: *ETS2436C  Title: BIOMEDICAL INSTRUMENTATION I  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  Other: 0.00  Fees: 0.00  
**Description:** 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.  
CCN: *ETS2527  Title: ELECTROMECHANICAL SYSTEMS  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00  
**Description:** This course covers gears and gearboxes, belts and pulleys, chains and sprockets, alignments and measures found in the industrial environment.  
CCN: *ETS2542C  Title: PROGRAMMABLE LOGIC CONTROLLERS  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00  Other: 0.00  Fees: 0.00  
**Description:** This course provides students with the basic operational concepts common to programmable controllers, focusing on Programmable Logic Controllers (PLC) principles, programming, and the fundamentals needed for simple process control.  
CCN: ETS2940  Title: BIOMEDICAL ENGINEERING TECH.INTERNSHIP  
Credit Hrs: 3.00
Total Contact Hrs: 234.00  Lecture: 0.00  Lab: 0.00  Clinical: 234.00
Other: 0.00  Fees: 12.90
Description: The student will participate in a 234-hour internship at a cooperating hospital or other appropriate medical facility. Topics will include orientation, orientation to biomedical engineering medical instrumentation theory, safety standards hands-on preventive maintenance procedures and equipment repair activities. The medical facility staff will directly supervise all aspects of this course.

Area: HIS  GENERAL HISTORY
CCN: *EUH1000  Title: WESTERN CIVILIZATION: ANCIENT THROUGH RENAISSANCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. EUH1000 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. EUH1000 meets the International/Intercultural competency requirement.

CCN: *EUH1001  Title: WESTERN CIVILIZATION: REFORMATION THROUGH MODERN
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. EUH1001 is a writing credit course
Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. EUH1001 meets the International/Intercultural competency requirement.

CCN: *EUH2032  Title: HISTORY OF THE HOLOCAUST
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course examines the historical origins, execution, and consequences of the Holocaust.

CCN: *EUH2052  Title: HISTORY OF SPAIN
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: EVR ENVIRONMENTAL SCIENCE
CCN: *EVR1001  Title: INTRODUCTION TO ENVIRONMENTAL SCIENCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *EVR1261  Title: FUNDAMENTALS OF AIR POLLUTION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *EVR1858  Title: ENVIRONMENTAL REGULATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Placement by Testing Department.

CCN: EVR2930  Title: ENVIRONMENTAL SCIENCE SEMINAR
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Selected current topics in environmental science and related subjects.

Area: COE  COOPERATIVE EDUCATION

CCN: EVR2949  Title: CO OP WORK EXPERIENCE
Credit Hrs:  3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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. Pre-requisite: Co-Op Department approval. Student will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Placement by Testing Department.

Area: EVR  ENVIRONMENTAL SCIENCE

CCN: *EVR3400C  Title: WILDLIFE ECOLOGY AND MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 36.00  Lab: 12.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *EVS2893C  Title: ENVIRONMENTAL SAMPLING AND ANALYSIS
Credit Hrs:  5.00
Total Contact Hrs: 112.00  Lecture: 48.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *EVS4905   Title: REVIEW OF SCIENTIFIC_LITERATURE
Credit Hrs:  0.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: A course where critical thinking is developed through the analysis and critique of scientific literature and research.
Area: BIO  BIOLOGY

CCN: *FAS4202C  Title: BIOLOGY OF FISH
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 40.00   Lab: 8.00    Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.
Area: CCJ  CRIMINAL JUSTICE

CCN: *FES2010   Title: INTRODUCTION TO EMERGENCY MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.
Area: FFP

CCN: *FFP1000   Title: INTRODUCTION TO FIRE SCIENCE
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.

CCN: *FFP1505   Title: FIRE PREVENTION PRACTICES
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.

CCN: *FFP1510   Title: CODES AND STANDARDS
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other:  0.00    Fees:  0.00
Description: 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.

<table>
<thead>
<tr>
<th>CCN: *FFP1540</th>
<th>Title: PRIVATE FIRE PROTECTION SYSTEMS 1</th>
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<tbody>
<tr>
<td>Credit Hrs: 3.00</td>
<td>Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00</td>
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<tr>
<td>Other: 0.00</td>
<td>Fees: 0.00</td>
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<tr>
<td>Description: This course examines requirements for and testing of fire sprinkler and standpipe systems, chemical systems, detection and alarm systems.</td>
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<tr>
<th>CCN: *FFP1740</th>
<th>Title: FIRE SERVICE COURSE DELIVERY</th>
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<tbody>
<tr>
<td>Credit Hrs: 3.00</td>
<td>Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00</td>
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<tr>
<td>Other: 0.00</td>
<td>Fees: 0.00</td>
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<td>Description: 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. 3 hrs. Lec.</td>
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<tr>
<th>CCN: *FFP1793</th>
<th>Title: FIRE AND LIFE SAFETY EDUCATOR I</th>
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<tbody>
<tr>
<td>Credit Hrs: 3.00</td>
<td>Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00</td>
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<td>Other: 0.00</td>
<td>Fees: 0.00</td>
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<tr>
<td>Description: 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.</td>
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<tr>
<th>CCN: *FFP1810</th>
<th>Title: FIREFIGHTING TACTICS &amp; STRATEGY</th>
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<tbody>
<tr>
<td>Credit Hrs: 3.00</td>
<td>Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00</td>
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<tr>
<td>Other: 0.00</td>
<td>Fees: 0.00</td>
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<tr>
<td>Description: 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. 3 hrs. lec.</td>
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Area: EMGT EMERGENCY MANAGEMENT

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<thead>
<tr>
<th>CCN: *FFP1830</th>
<th>Title: INTRODUCTION TO HAZARDS</th>
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<tr>
<td>Credit Hrs: 3.00</td>
<td>Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00</td>
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<td>Other: 0.00</td>
<td>Fees: 0.00</td>
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<tr>
<td>Description: 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.</td>
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Area: FFP

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<tr>
<th>CCN: *FFP2111</th>
<th>Title: FIRE CHEMISTRY</th>
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<td>Description:</td>
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</table>
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Prerequisite: Municipal Fire Inspector Certification.

CCN: *FFP2120   Title: FIRE SERVICE BUILDING CONSTRUCTION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *FFP2301   Title: FIRE HYDRAULICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Study of the physical properties of water used in fire protection. Basic hydraulic measuring units, facts, theories and formulas for problem solving.

CCN: *FFP2302   Title: FIRE APPARATUS AND PROCEDURES
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *FFP2521   Title: CONSTRUCTION DOCUMENTS AND PLANS REVIEW
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *FFP2541   Title: PRIVATE FIRE PROTECTION SYSTEMS II
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *FFP2610   Title: ORIGIN & CAUSE
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 courtroom.

CCN: *FFP2630   Title: LATENT INVESTIGATION
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 40.00   Lab: 4.00   Clinical: 0.00
Other: 4.00   Fees: 0.00
Description: 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.

CCN: *FFP2670   Title: LEGAL ISSUES FOR INVESTIGATORS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *FFP2706   Title: PUBLIC INFORMATION OFFICER
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *FFP2720  Title: COMPANY OFFICER
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Study of superior subordinate relationships, motivation, leadership, morale, discipline, work planning and other supervisory responsibilities related to fire dept. operations.

CCN: *FFP2741  Title: FIRE SERVICE COURSE DESIGN
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *FFP2770  Title: ETHICAL AND LEGAL ISSUES FOR THE FIRE SERVICE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *FFP2780  Title: FIRE DEPARTMENT ADMINISTRATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: EMGT EMERGENCY MANAGEMENT

CCN: *FFP2800  Title: EMERGENCY MANAGEMENT PUBLIC EDUCATION PROGRAMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: FFP

CCN: *FFP2811  Title: FIREFIGHTING TACTICS & STRATEGY 2
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 fireground.
Area: EMGT EMERGENCY MANAGEMENT
CCN: *FFP2831  Title: HAZARD PLANNING & MITIGATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *FFP2840  Title: DISASTER RESPONSE & RECOVERY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *FFP2841  Title: EMERGENCY PLANNING FOR BUSINESS & INDUSTRY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
Area: COMM COMMUNICATIONS
CCN: *FIL1030  Title: FILM HISTORY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *FIL1100C  Title: SCREENWRITING FUNDAMENTALS
Credit Hrs: 3.00
Total Contact Hrs: 72.00  Lecture: 24.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: ART  ART, FINE AND APPLIED
CCN: *FIL1131C  Title: SCREENWRITING WORKSHOP
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 24.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *FIL1420C  Title: INTRODUCTION TO FILMMAKING
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 24.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 98.00
Description: 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 short narrative motion pictures.

CCN: *FIL1456C  Title: FILM PRODUCTION DESIGN
Credit Hrs:  3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *FIL1552C  Title: FILM EDITING FUNDAMENTALS
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 24.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Basic theory and practice of nonlinear editing
for narrative motion pictures using industry
motion picture editing software.

Area: COMM COMMUNICATIONS
CCN: *FIL2000  Title: FILM APPRECIATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. FIL2000 is a writing
credit course. Students must earn a minimum grade
of C to meet the requirements of the Gordon Rule
for writing. FIL2000 meets the International/
Intercultural competency requirement.

CCN: *FIL2432C  Title: FICTION FILMMAKING
Credit Hrs:  3.00
Description: Building on the basic concepts of Introduction to Filmmaking and Nonfiction Filmmaking, 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 short narrative motion pictures.

Area: ART  ART, FINE AND APPLIED
CCN: *FIL2438C  Title: NONFICTION FILMMAKING
Credit Hrs: 3.00

Description: Building on the concepts of Introduction to Filmmaking, students continue to develop an understanding of professional digital film production with emphasis on nonfiction production. Industry positions, procedures and protocols will be emphasized during the production of short motion pictures.

CCN: *FIL2473C  Title: VISUAL EFFECTS FUNDAMENTALS
Credit Hrs: 3.00

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

CCN: *FIL2515C  Title: FILM CAPSTONE I: PRODUCTION
Credit Hrs: 3.00

Description: The cumulative competencies of the Film Production Technology Program are tested in the areas of PreProduction and Production in the development and execution of team-led, professional-level, portfolio-quality short films. This course is held in tandem with Film Capstone II: Post Production, where students will finalize the completion of the Post Production of the films shot in this course. Emphasis is placed on preproduction and production protocols, producing, direction of actors, rehearsals, camera operation, lighting, visual effects, scene coverage, shooting for continuity, production design, gripping, sound recording, and post production management.

CCN: *FIL2537C  Title: SOUND DESIGN FUNDAMENTALS
Credit Hrs: 3.00

Description: 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.

CCN: *FIL2572C  Title: POST PRODUCTION WORKSHOP
Credit Hrs:  3.00
Total Contact Hrs:  72.00  Lecture: 24.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Students will employ advanced theory, techniques and procedures used in editing, sound design, visual effects and color correction together as complementary elements to complete the entire post production phase in filmmaking, from synchronizing footage to creating media files specifically formatted for distribution, of a film using industry standard software.

Area: COMMUNICATIONS
CCN: *FIL2573C  Title: FILM CAPSTONE II: POST PRODUCTION
Credit Hrs:  3.00
Total Contact Hrs:  144.00  Lecture: 72.00  Lab: 72.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: The cumulative competencies of the Film Production Technology Program are tested in the areas of Post Production in the completion of team-led, professional-level, portfolio-quality short films. This course is held in tandem with Film Capstone I: Production, where students developed and shot the short films to be completed in this course. Emphasis is placed on post production protocols, film editing, sound design, execution of pickups, ADR and Foley recording, visual effects, color correction, and post production management. In this course, students will conduct all of the post production of their Capstone I film and prepare it for distribution, including all of the marketing materials and the film itself formatted for distribution.

Area: ART, FINE AND APPLIED
CCN: *FIL2611  Title: FILM BUSINESS AND ENTREPRENEURSHIP
Credit Hrs:  3.00
Total Contact Hrs:  48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *FIL2680  Title: FILM PRODUCING AND PRODUCTION MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs:  48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *FIL2930  Title: SPECIAL TOPICS IN FILM AND VIDEO
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester.

CCN: *FIL2945  Title: FILM INTERNSHIP
Credit Hrs: 3.00
Total Contact Hrs: 150.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 150.00  Fees: 0.00
Description: Students will learn to apply the various skills gained throughout the program in a semester-long immersion at an established film entertainment company or a faculty-supervised independent project for a minimum of 100 hours. The student will produce a portfolio of work and a resume.

Area: FIN  FINANCE

CCN: *FIN2051  Title: FINANCE OF INTERNATIONAL TRADE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *FIN2100  Title: PERSONAL FINANCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course provides a survey of the areas of personal economic and financial issues with which all individuals must contend. Course content provides a basic understanding in the following areas: BUDGETING, PERSONAL FINANCIAL MANAGEMENT, CREDIT, TAXES, RISK MANAGEMENT, INVESTMENTS, RETIREMENT PLANNING AND ESTATE PLANNING.

CCN: *FIN3400  Title: PRINCIPLES OF FINANCIAL MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: BUS  BUSINESS
CCN: *FIN3403   Title: MANAGERIAL FINANCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This is an introductory course in managerial finance in which students gain a clear basic understanding of the fundamentals of finance and 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.

Area: FSS  FOOD SERVICE/HOSPITALITY/TRVL
CCN: FOS2201    Title: FOOD SERVICE SANITATION & SAFETY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: FRL  FOREIGN LANGUAGE, MODERN
CCN: *FRE1000   Title: ELEMENTARY FRENCH CONVERSATION
Credit Hrs: 3.00
Total Contact Hrs: 64.00 Lecture: 48.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. One hour language laboratory weekly. Special Fee Charged.

CCN: *FRE1120   Title: BEGINNING FRENCH I
Credit Hrs: 4.00
Total Contact Hrs: 64.00 Lecture: 64.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. FRE1120 meets the foreign language and the International/Intercultural competency requirements.

**CCN:** *FRE1121   Title: BEGINNING FRENCH II*
**Credit Hrs:** 4.00
**Total Contact Hrs:** 64.00  **Lecture:** 64.00  **Lab:** 0.00  **Clinical:** 0.00  **Other:** 0.00  **Fees:** 0.00

**Description:** A continuation of FRE 1120 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 multi-media activities, are designed to develop and enhance communicative competence and cultural sensitivity. Skills and concepts are further polished in FRE 2220. FRE1121 meets the foreign language and the International/Intercultural competency requirements.

**CCN:** *FRE2220   Title: INTERMEDIATE FRENCH I*
**Credit Hrs:** 4.00
**Total Contact Hrs:** 64.00  **Lecture:** 64.00  **Lab:** 0.00  **Clinical:** 0.00  **Other:** 0.00  **Fees:** 0.00

**Description:** 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. FRE2220 meets the foreign language requirement and the International/intercultural competency requirement.

**Area:** FSS  FOOD SERVICE/HOSPITALITY/TRVL
**CCN:** FSS1203C   **Title:** QUANTITY OF FOOD PRODUCTION 1
**Credit Hrs:** 3.00
**Total Contact Hrs:** 56.00  **Lecture:** 40.00  **Lab:** 16.00  **Clinical:** 0.00  **Other:** 0.00  **Fees:** 0.00

**Description:** 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.
CCN: FSS1240C   Title: CLASSICAL CUISINE
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. Instructor's approval or

CCN: FSS1246C   Title: BAKING AND PASTRIES_I
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *FSS1284   Title: CATERING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: FSS2204C   Title: QUANTITY OF FOOD PRODUCTION 2
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course will enable students to learn and execute various methods preparing vegetable, starch, meat, fish, and poultry cookery, including the basic cooking techniques: sauteing, roasting, poaching, braising and frying.

CCN: FSS2205C   Title: QUANTITY OF FOOD PRODUCTION 3
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: FSS2242C  Title: INTERNATIONAL CUISINE
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Instructor's approval or

CCN: FSS2247C  Title: BAKING AND PASTRIES_II
Credit Hrs: 3.00
Total Contact Hrs: 56.00  Lecture: 40.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: FSS2248C  Title: GARDE MANGER
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: FSS2251  Title: FOOD AND BEVERAGE MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 56.00  Lecture: 40.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: FSS2500  Title: FOOD SERVICE COSTING AND CONTROLS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: CE27 ENRICHMENT
CCN: *FYE0002  Title: FIRST YEAR EXPERIENCE SEMINAR
Credit Hrs:  0.00
Total Contact Hrs: 12.50  Lecture: 12.50  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This seminar is designed to provide first year students at Broward College with specific strategies, tools, and resources to insure student success and completion.

Area: GEO GEOGRAPHY
CCN: *GEA2000  Title: WORLD GEOGRAPHY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: GEA2000 is an introductory course, that provides a survey of the major regions and countries of the world, with regard to their physical, cultural, economic, political and environmental characteristics. While regions are defined based on overarching characteristics for that particular area, each world region is extremely dynamic. This course will examine both the continuity and diversity within and across world regions. GEA2000 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. GEA2000 meets the International/Intercultural competency requirement.

CCN: *GEA2030  Title: GEOGRAPHY OF THE EASTERN WORLD
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A regional survey of the human/cultural and physical/environmental aspects of the eastern 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.

CCN: *GEA2040  Title: GEOGRAPHY OF THE WESTERN WORLD
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: GEB  BUSINESS
CCN: *GEB1011   Title: INTRODUCTION TO BUSINESS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *GEB2112   Title: ENTREPRENEURSHIP
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course explores the process, skills and attitudes that enable 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.

CCN: *GEB2430   Title: BUSINESS ETHICS
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: COE  COOPERATIVE EDUCATION
CCN: *GEB2949   Title: CO OP WORK EXPERIENCE
Credit Hrs:   3.00
Total Contact Hrs: 144.00   Lecture: 0.00   Lab: 0.00   Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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. All students must contact the Cooperative Education Office to obtain registration approval.

Area: GEB BUSINESS
CCN: *GEB2955 Title: INTERNATIONAL CURRENT BUSINESS PRACTICES
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Upon successful completion of this course, students should have a broad conceptual viewpoint of international 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.

CCN: *GEB3213 Title: BUSINESS COMMUNICATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: BUS BUSINESS
CCN: *GEB4131 Title: ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: GEO GEOGRAPHY
CCN: *GEO0100 Title: INTRODUCTION TO GEOGRAPHY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. GEO2370 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. GEO2370 meets the International/Intercultural competency requirement.

CCN: *GEO2200  Title: PHYSICAL GEOGRAPHY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GEO2370  Title: CONSERVATION OF NATURAL RESOURCES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. GEO2370 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. GEO2370 meets the International/Intercultural competency requirement.

CCN: *GEO2420  Title: INTRODUCTION TO HUMAN / CULTURAL GEOGRAPHY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course will introduce students to geographical concepts as applied in human and cultural phenomena in the world today. Emphasis will be placed on tensions between globalization and human diversity. Following a systematic approach, the course will offer theories and techniques developed by geographers that assist in understanding both human-cultural interaction and human-environmental interaction, while several subfields of the discipline will be introduced.
including economic, political, and social geographies. GEO2420 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. GEO2420 meets the International/Intercultural competency requirement.

Area: FRL FOREIGN LANGUAGE, MODERN
CCN: *GER1120 Title: BEGINNING GERMAN I
Credit Hrs: 4.00
Total Contact Hrs: 64.00 Lecture: 64.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. GER1120 meets the foreign language and the International/Intercultural competency requirements.

CCN: *GER1121 Title: BEGINNING GERMAN II
Credit Hrs: 4.00
Total Contact Hrs: 64.00 Lecture: 64.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. GER1121 meets the foreign language and the International/Intercultural competency requirements.

CCN: *GER1170 Title: GERMAN STUDY TRAVEL
Credit Hrs: 3.00
Total Contact Hrs: 336.00 Lecture: 0.00 Lab: 0.00 Clinical: 0.00
Other: 336.00 Fees: 0.00
Description: A course designed for students who wish to combine the study of German with subsequent travel to a German speaking region.

CCN: *GER2220 Title: INTERMEDIATE GERMAN I
Credit Hrs: 4.00
Total Contact Hrs: 64.00 Lecture: 64.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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 on-line, laboratory and/or multi-media exercises, designed to develop student proficiency and confidence. Students are expected to further their skills by studying abroad. This course meets the foreign language competency and is an
international/intercultural competency course.

Area: BEH  BEHAVIORAL SCIENCE
CCN: *GEY2621  Title: PSYCHOLOGY OF AGING
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: EVR  ENVIRONMENTAL SCIENCE
CCN: *GIS1000  Title: MAPPING FUNDAMENTALS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Lab assignments provide an opportunity to apply cartographic theory in a wide range of mapping exercises.

Area: GEO  GEOGRAPHY
CCN: *GIS1030  Title: REMOTE SENSING AND APPLICATIONS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course introduces basic concepts and fundamentals of remote sensing, image processing, and the Global Positioning System (GPS). The principles and processes involved in airphoto 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. Prerequisite: Knowledge of Windows operating system.

CCN: *GIS1040C  Title: INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GIS1042C  Title: INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS II
Credit Hrs:  3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 26.00
Description: 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.

CCN: *GIS1047C  Title: APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS
Credit Hrs:  3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 26.00
Description: A combined lecture and laboratory course in which students will draw upon the principles learned in GIS I and GIS II to increase/refine skills and apply them to individual and/or group projects.

CCN: *GIS2040C  Title: INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GIS2042C  Title: INTRODUCTION TO GEOGRAPHIC INFORMATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GIS4301C  Title: ADVANCED GEOGRAPHIC INFORMATION SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: GLY  GEOLOGY
CCN: *GLY1010  Title: PHYSICAL GEOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GLY1010L  Title: PHYSICAL GEOLOGY LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 17.00
Description: Study of common rocks and minerals forming the lithosphere, including their classification, origin and the interpretation of physical landforms through the study of geologic maps. One 2-hour laboratory weekly.

CCN: *GLY1100  Title: HISTORICAL GEOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 of 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.

CCN: *GLY1100L  Title: HISTORICAL GEOLOGY LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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, the interpretation of maps and aerial photography using principles to determine the sequence geologic events, an application of paleontologic data, the interpretation of depositional environments, the identification of strigraphic correlations, the interpretation of surface and subsurface structure, and the conducting of paleo-geographic exercises.

Area: EVR ENVIRONMENTAL SCIENCE
CCN: *GLY4072C Title: GLOBAL ENVIRONMENTAL CHANGE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 32.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. Prerequisite: Admission to Environmental Science BS program or permission of instructor.

Area: GLY GEOLOGY
CCN: *GLY4203 Title: ENVIRONMENTAL GEOLOGY AND LITHOSPHERIC PROCESSES
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: EVR ENVIRONMENTAL SCIENCE
CCN: *GLY4731 Title: COASTAL AND MARINE SCIENCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course introduces students to physical, biological, and "man caused" 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.

CCN: *GLY4820   Title: HYDROGEOLOGY  
Credit Hrs:   3.00  
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00  
Other: 0.00   Fees: 0.00  

Description: This course provide 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.

CCN: *GLY4820L  Title: HYDROGEOLOGY LAB  
Credit Hrs:   1.00  
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00  
Other: 0.00   Fees: 10.00  

Description: 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.

Area: GRA   GRAPHIC DESIGN TECHNOLOGY  
CCN: *GRA1110C  Title: APPLIED DESIGN 1  
Credit Hrs:   3.00  
Total Contact Hrs: 72.00   Lecture: 32.00   Lab: 40.00   Clinical: 0.00  
Other: 0.00   Fees: 0.00  

Description: 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 f organizations.

CCN: *GRA1144C  Title: WEB PUBLISHING
Credit Hrs: 3.00
Total Contact Hrs: 72.00  Lecture: 32.00  Lab: 40.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GRA1151C  Title: ILLUSTRATION DESIGN 1
Credit Hrs: 3.00
Total Contact Hrs: 72.00  Lecture: 32.00  Lab: 40.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GRA1201C  Title: TYPOGRAPHIC DESIGN
Credit Hrs: 3.00
Total Contact Hrs: 72.00  Lecture: 32.00  Lab: 40.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GRA2121C  Title: PUBLICATION DESIGN
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 32.00  Lab: 40.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *GRA2134C  Title: USER EXPERIENCE & INTERFACE DESIGN
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 30.00  Lab: 42.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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 users needs, and mapping out the most efficient pathways to their goals the designer will use color, typography, iconography, photography and spacial relationships to make a user interface that expedites the journey.

CCN: *GRA2157C  Title: ILLUSTRATION DESIGN II
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 32.00  Lab: 40.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This advanced illustration class will expand the students' visual problem-solving vocabulary to include informational graphics, mapmaking and editorial illustration. Illustrations will use digital 2D and 3D 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.

CCN: *GRA2171C  Title: BRAND AND AD DESIGN
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 32.00  Lab: 40.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *GRA2180C Title: APPLIED DESIGN II
Credit Hrs: 3.00
Total Contact Hrs: 72.00 Lecture: 32.00 Lab: 40.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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, wayfinding 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 employed, assessed and communicated to the class with each project. The goal is to find the most eco-friendly design solutions while educating the client and meeting their needs.

CCN: *GRA2185C Title: DESIGN PRODUCTION
Credit Hrs: 3.00
Total Contact Hrs: 72.00 Lecture: 32.00 Lab: 40.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: ART ART, FINE AND APPLIED
CCN: *GRA2190C Title: INTRODUCTION TO GRAPHIC DESIGN
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 32.00 Lab: 64.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *GRA2191C Title: GRAPHIC DESIGN II
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 32.00 Lab: 64.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: GRA  GRAPHIC DESIGN TECHNOLOGY
CCN: *GRA2403  Title: PRINCIPLES OF PROJECT MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GRA2425C  Title: PORTFOLIO & BUSINESS OF DESIGN
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 32.00  Lab: 40.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *GRA2754C  Title: WEB DESIGN II
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 32.00  Lab: 40.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: ART  ART, FINE AND APPLIED
CCN: *GRA2810C  Title: SEO & SOCIAL MEDIA DESIGN
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 30.00  Lab: 42.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: GRA  GRAPHIC DESIGN TECHNOLOGY
CCN: GRA2940C  Title: GRAPHIC DESIGN INTERNSHIP
Credit Hrs:  1.00
### Total Contact Hrs: 272.00  Lecture: 16.00   Lab: 0.00    Clinical: 0.00
Other: 256.00  Fees: 0.00

**Description:**
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.

**Area:** FRL  FOREIGN LANGUAGE, MODERN  
**CCN:** *HBR1120  Title: BEGINNING HEBREW I  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

**Description:**
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. Student is expected to continue with HBR1121. HBR1120 meets the foreign language and the International/Intercultural competency requirements.

**CCN:** *HBR1121  Title: BEGINNING HEBREW II  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

**Description:**
Continuation of HBR 1120. 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. Skills and concepts are further polished in HBR 2220. HBR1121 meets the foreign language and the International/Intercultural competency requirements.

**CCN:** *HBR2220  Title: INTERMEDIATE HEBREW I  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

**Description:**
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.

Area: FSS FOOD SERVICE/HOSPITALITY/TRVL
CCN: *HFT1050 Title: INTRO TO HOSPITALITY & TOURISM MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *HFT1210 Title: SUPERVISORY DEVELOPMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *HFT1941 Title: OPERATIONS AND SERVICE PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 16.00 Lecture: 16.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course requires practical work experience or participation in formalized internship program in related disciplines in a 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.

CCN: *HFT2220 Title: ORGANIZATION AND PERSONNEL MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.
CCN: *HFT2250   Title: HOTEL MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course provides a study of the growth and progress of the hotel industry and how hotels are developed, organized, financed and operated.
Area: FSA  FOOD SERVICE/HOSPITALITY/TRVL

CCN: *HFT2410   Title: FRONT OFFICE SYSTEMS AND PROCEDURES
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: FSS  FOOD SERVICE/HOSPITALITY/TRVL

CCN: *HFT2460   Title: FINANCIAL MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *HFT2500   Title: MARKETING
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *HFT2511   Title: CONVENTION AND GROUP BUSINESS MARKETING MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *HFT2600   Title: HOSPITALITY LAW
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *HFT2721  Title: TRAVEL AGENCY MANAGEMENT & OPERATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course provides familiarization with travel agency operations including the selling, transporting, storing, advertising, planning, and management of travel services. The course also provides hands-on training in computerized reservations (SABRE) and keyboarding, and incorporates key aspects of managing corporate travel.

CCN: *HFT2730  Title: TOUR PACKAGING
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *HFT2942  Title: MANAGEMENT AND CONTROL PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: HIM  HEALTH INFORMATION MANAGEMENT
CCN: HIM1000  Title: INTRO TO HEALTH INFORMATION TECHNOLOGY MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: HIM1110    Title: HEALTH DATA CONCEPTS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: HIM1110L    Title: HEALTH DATA CONCEPTS LAB
Credit Hrs:   1.00
Total Contact Hrs: 48.00   Lecture: 0.00    Lab: 48.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: HIM1253C    Title: CODING I
Credit Hrs:   3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. This class will be taken in conjunction with the Coding I Lab course, HIM1253L.

CCN: HIM1253L    Title: CODING I LAB
Credit Hrs:   1.00
Total Contact Hrs: 32.00   Lecture: 0.00    Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This lab 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.

CCN: HIM1260  Title: REIMBURSEMENT METHODOLOGY
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: HIM1800  Title: PROFESSIONAL PRACTICE EXPERIENCE: BASIC
Credit Hrs:  2.00
Total Contact Hrs: 150.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 150.00  Fees: 12.90
Description: 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 I Workbook.

CCN: HIM2012  Title: HEALTH RECORDS LAW
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: HIM2112C  Title: ELECTRONIC MEDICAL RECORD AND TECHNOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: HIM2214  Title: HEALTH STATISTICS
Credit Hrs:  2.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This hands-on lab 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.

CCN: HIM2232C  Title: CODING II
Credit Hrs:  3.00
Total Contact Hrs: 72.00  Lecture: 48.00  Lab: 24.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This coding course is designed to build onto the HIM1253 Coding I course by enhancing the students 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. Students will review more advance concepts and techniques for ICD-10-CM and ICD-10-PCS coding using patient records in both paper and electronic format.

CCN: HIM2433  Title: PATHOPHYSIOLOGY AND PHARMACOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: HIM2500  Title: PERFORMANCE IMPROVEMENT
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: HIM2512  Title: SUPERVISION & ORGANIZATIONAL LIFE
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: HIM2652  Title: HEALTH INFORMATION SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: HIM2728C  Title: CODING III
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: HIM2810  Title: PROFESSIONAL PRACTICE 2
Credit Hrs: 2.00
Total Contact Hrs: 150.00  Lecture: 0.00  Lab: 0.00  Clinical: 150.00
Other: 0.00  Fees: 12.90
Description: This capstone course provides the student with a supervised professional practice experience in
either a health information management setting or a simulated health information management setting, using the AHIMA Vlab. Emphasis will be placed on providing opportunities for the student to relate classroom theory to the actual functions of a health information department. This course also enables students to further develop critical thinking and problem solving skills in real life situations.

CCN: HIM2930  Title: TRANSITION SEMINAR
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This is a registry review course. The course will introduce the student to the preparation needed to sit for the RHIT National Examination by AHIMA. The course will also discuss various career options and strategies. To pass this course, the student must pass the final Mock RHIT Exam with a score of 75% or higher as required for the RHIT National Examination.

Area: HIS  GENERAL HISTORY
CCN: *HIS2939  Title: SPECIAL TOPICS IN HISTORY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *HIS2955  Title: HISTORY STUDY ABROAD
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A combination of classroom preparation plus foreign travel. Variable content depending on countries visited. Historical background and travel preparation will be included. Prerequisite: instructor's approval.

Area: PEL  PHYSICAL EDUC ACTIVITIES
CCN: *HLP1081C  Title: TOTAL WELLNESS
Credit Hrs: 2.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Total Wellness emphasizes the importance of knowledge, attitudes, and practices relating to an individual's overall health. It is a course designed to expose students to a broad range of issues and information relating to the dimensions of wellness that include: physical, emotional, intellectual, spiritual, social, environmental and financial wellness. This course integrates the dimensions of wellness and fitness in both a classroom and exercise environment so that the student understands the lifelong effects of healthy lifestyle choices. Course topics include,
but are not limited to: cardiovascular health, nutrition, exercise prescription, stress reduction, disease prevention, financial readiness and environmental responsibility. HLP1081C meets the International/Intercultural competency requirement.

CCN: *HLP1087   Title: WELLNESS WORKOUT
Credit Hrs:  1.00
Total Contact Hrs:  32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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. Prerequisites: (any of the following): HLP1081, PEM1116, PEM1131, PEM1141, PEM1181, PEN1171, HSC1101C or instructor's approval.

Area: COE  COOPERATIVE EDUCATION

CCN: *HLP2949   Title: CO OP WORK EXPERIENCE
Credit Hrs:  3.00
Total Contact Hrs:  144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other:  144.00  Fees:  0.00
Description: 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.

Area: HSA  HEALTH SERVICES ADMINISTRATION

CCN: *HSA2010   Title: ISSUES AND TRENDS IN PUBLIC HEALTH
Credit Hrs:  3.00
Total Contact Hrs:  48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This course introduces the field of public health including its history, basic principles, core disciplines, and current events. It will provide a broad framework for understanding public health's role in community health, prevention, and medicine. Basic principles of epidemiology and the core disciplines will be introduced using case studies. The importance of one health and global health will be emphasized and related to real life applications.

CCN: HSA2810   Title: PRACTICUM IN HEALTH FACILITY ADMINISTRATION
Credit Hrs:  6.00
Total Contact Hrs:  240.00  Lecture: 0.00  Lab: 0.00  Clinical: 240.00
Other:  0.00  Fees:  8.15
Description: The Health Services Management practicum course is designed to provide practical field experience knowledge. The course consists of 204 hours, 120 hours will be dedicated to internship and 84 hours
will be dedicated to coursework.
Area: HIM HEALTH INFORMATION MANAGEMENT
CCN: *HSC1000 Title: INTRODUCTION TO HEALTH SCIENCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: PET PHYSICAL EDUCATION THEORY
CCN: *HSC1101C Title: INTRODUCTION TO HEALTHFUL LIVING
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 16.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 10.00
Description: 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.

Area: NUR NURSING TECHNOLOGY
CCN: *HSC1149 Title: PHARMACOLOGY
Credit Hrs: 2.00
Total Contact Hrs: 32.00 Lecture: 32.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: MDT MEDICAL TERMINOLOGY
CCN: *HSC1531 Title: MEDICAL TERMINOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: PET PHYSICAL EDUCATION THEORY
CCN: *HSC2100 Title: PERSONAL AND COMMUNITY HEALTH
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course explores the fundamental principles
of individual and community health with an overall
emphasis on health awareness and education. The
course material will cover: personal health
behaviors and medical prevention including
insurance and health care services; nutrition;
weight management; exercise for health;
cardiovascular health; stress; mental health;
family planning; infectious diseases; drugs and
alcohol; environmental health; cancer; and the
aging process.

CCN: *HSC2400 Title: FIRST AID AND SAFETY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.
Elective credit only.

CCN: *HSC2577 Title: PRINCIPLES OF NUTRITION FOR HEALTH, FITNESS, & SPORT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: HSA HEALTH SERVICES ADMINISTRATION
CCN: *HSC2669 Title: PREVENTION AND COMMUNITY HEALTH
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course serves as an introduction to
prevention methods in public health. This course
is designed to provide an overview of the three
primary levels of prevention: primary, secondary,
and tertiary prevention. Including discussion of
community health primarily from the perspective of leading causes of disease and death in the United States. Exploration of the impact of environment, behavior, and disease, including prevention and treatment strategies, on human health, public resources, and quality of life for society.

CCN: HSC2810    Title: HEALTH NAVIGATOR PRACTICUM
Credit Hrs:   3.00
Total Contact Hrs: 102.00 Lecture: 0.00 Lab: 0.00 Clinical: 0.00
Other: 102.00    Fees: 0.00
Description: The Health Navigator practicum course is designed to provide practical field knowledge. The course consists of 102 hours, 70 hours will be dedicated to internship and 32 hours will be dedicated to coursework.

Area: HUM HUMANITIES TRAVEL STUDY
CCN: *HUM1020    Title: FOUNDATIONS OF THE HUMANITIES
Credit Hrs:   3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. HUM1020 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. HUM1020 meets the International/Intercultural competency requirement.

CCN: *HUM2700    Title: HUMANITIES TRAVEL STUDY
Credit Hrs:   3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: HLP HEALTH, LEISURE & PHYS EDUC
CCN: *HUN1201    Title: HUMAN NUTRITION
Credit Hrs:   3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00    Fees: 5.25
Description: 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.

Area: HUN HUMAN NUTRITION
CCN: *HUN3011  Title: PRINCIPLES OF NUTRITION, DIET, AND DISEASE
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
Area: HUS  HUMAN SERVICES
CCN: *HUS1001  Title: INTRODUCTION TO HUMAN SERVICES
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
Area: BEH  BEHAVIORAL SCIENCE
CCN: *HUS1302  Title: BASIC COUNSELING SKILLS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *HUS1320  Title: THEORIES AND FOUNDATIONS OF CRISIS INTERVENTION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *HUS1400  Title: INTRODUCTION TO CHEMICAL DEPENDENCY
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *HUS1801   Title: HUMAN SERVICES PRACTICUM 1
Credit Hrs: 3.00
Total Contact Hrs: 148.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 100.00   Fees: 0.00
Description: This course provides the first of two hands-on field experiences for students pursuing an associates 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.
CCN: *HUS2200   Title: INTRODUCTION TO GROUP DYNAMICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *HUS2318   Title: DOMESTIC ABUSE AND FAMILY VIOLENCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *HUS2401   Title: SUBSTANCE ABUSE AND TREATMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *HUS2415   Title: CASE MANAGEMENT IN HUMAN SERVICES
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course will explore various approaches used by the human services worker to help facilitate linking a 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.

CCN: *HUS2442   Title: DRUG AWARENESS AND EDUCATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *HUS2445   Title: PRACTICE FOR WORKING WITH DYSFUNCTIONAL FAMILY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *HUS2500   Title: ETHICS IN HUMAN SERVICES
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *HUS2502   Title: ISSUES AND ETHICS IN DOMESTIC ABUSE AND FAMILY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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.

CCN: *HUS2531  Title: ISSUES OF AGING AND FAMILY DYNAMICS  Credit Hrs: 3.00

Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: This course examines factors such as health, finances, and social roles as they relate to individuals in late adulthood. Familial role changes and independence of the elderly are explored. A holistic approach is taken to understanding the well-being of the elderly in particular, and the family unit in general.

CCN: *HUS2535  Title: ELDER ABUSE AND AGING  Credit Hrs: 3.00

Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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.

CCN: *HUS2801  Title: HUMAN SERVICES PRACTICUM 2  Credit Hrs: 2.00

Total Contact Hrs: 132.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  Other: 100.00  Fees: 0.00

Description: 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.

Area: IDS  INTERDISCIPLINARY STUDIES

CCN: *IDH2121  Title: HONORS INTERDISCIPLINARY STUDIES  Credit Hrs: 3.00

Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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
inquires 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.

Area: CRPL CAREER PLANNING
CCN: *IDS1030  Title: INTRODUCTION TO TEAM SELF MANAGEMENT WITH EDUCATIO
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *IDS1040  Title: TEAM SELF-MANAGEMENT WITH SOCIAL JUSTICE TOPICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: STD CAREER PLANNING WORKSHOP
CCN: *IDS1999C  Title: RESEARCH IN SOCIAL JUSTICE
Credit Hrs:  3.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *IDS2931  Title: INTERDISCIPLINARY LEADERSHIP STUDIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: POS  POLITICAL SCIENCE

CCN: *INR2002  Title: INTRODUCTION TO INTERNATIONAL RELATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. INR2002 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. INR2002 meets the International/Intercultural competency requirement.

Area: COP  COMPUTER SCIENCE

CCN: *ISM1000C  Title: STEM IT SKILLS AND COMPETENCIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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, workplace, and professional development skills.

Area: BUS  BUSINESS
CCN: *ISM2200C  Title: APPLIED BUSINESS ANALYTICS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 16.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *ISM2308C  Title: AGILE FUNDAMENTALS
Credit Hrs:   4.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course will cover the Agile mindset, values, principles, and general concepts. Students will explore the concepts of what it means to "be agile while doing agile" and achieve professional agility. The course is the foundation to Project Management Delivery and does not include a specific focus on a particular agile methodology or framework. A focus will be provided to the International Consortium for Agile (ICAgile) content domains for the Agile Fundamentals professional certification (ICP). Students will understand the history of the agile movement, the distinctions among Agile values, principles, and practices, key aspects of value-driven development, adaptive planning techniques, and how to cultivate the collaboration with customers, within organizations and within teams.

Area: COP  COMPUTER SCIENCE
CCN: *ISM2311C  Title: IT PROJECT MANAGEMENT: CAPSTONE
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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).

CCN: *ISM2410C  Title: ANALYZING AND VISUALIZING DATA WITH POWER BI
Credit Hrs:  4.00
Description: This course will enable students to maximize the value of their data assets by using Power BI. Students will design and build scalable data models, clean and transform data, and enable advanced analytic capabilities that provide meaningful business value through easy-to-comprehend data visualizations. Students will also gain a fundamental understanding of data repositories and data processing both on-premises and in the cloud. Practice will also be provided to thoroughly prepare students for a Microsoft Certification Exam in Power Reporting.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *ISM3013C  Title: INFORMATION SYSTEMS MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00    Fees: 10.00

Description: 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. A focus will be provided on the application of IT service management best practices, enabling students to look at IT service management through an end-to-end operating model for the creation, delivery and continual improvement of tech-enabled product and services.

CCN: *ISM3054C  Title: WEB SYSTEMS AND TECHNOLOGIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00    Fees: 10.00

Description: 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.

CCN: *ISM3139C  Title: ADVANCED DATA VISUALIZATION WITH EXCEL
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.

CCN: *ISM3212C  Title: DATABASE MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00    Fees: 10.00

Description: This course provides the foundational concepts of
database design; conceptual, logical and physical phases. In this course, you will create relational databases, write SQL statements to extract information to satisfy business reporting requests create entity relationship diagrams (ERDs) to design databases, and analyze table designs for excessive redundancy.

CCN: *ISM3309C  Title: AGILE PRODUCT OWNERSHIP
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other:  0.00  Fees: 10.00
Description: This course will cover value-driven software delivery, the accompanying mindset, and key agile practices designed to emphasize customer value. It also looks at creating organizational and team environments conducive to frequent and transparent collaboration between the business and development teams. A focus will be provided to the International Consortium for Agile (ICAgile) content domains for the Agile Product Ownership professional certification.

Area: MAN  MANAGEMENT

CCN: *ISM3314C  Title: APPLIED PROJECT MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other:  0.00  Fees: 10.00
Description: 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.

CCN: *ISM3320  Title: INFORMATION SYSTEMS CONTROL
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: *ISM3432  Title: APPLIED QUALITY ASSURANCE METHODOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course teaches the IT professional the fundamentals of quality assurance for system development and software creation. The learned outcomes 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.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *ISM3545C  Title: DATA ANALYTICS TECHNOLOGIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *ISM4138C  Title: APPLIED DATA INTEGRATION AND MANIPULATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 24.00   Lab: 24.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *ISM4220C  Title: NETWORKS AND DATA COMMUNICATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *ISM4318C  Title: AGILE PROJECT MANAGEMENT
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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).

CCN: *ISM4323C  Title: COMPTIA ADVANCED SECURITY PRACTITIONER (CASP)
Credit Hrs: 4.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: MAN  MANAGEMENT
CCN: *ISM4382   Title: GLOBAL INFORMATION SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: COMP COMPUTER AND INFO SCIENCE
CCN: *ISM4415C  Title: APPLIED DATA REPORTING
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *ISM4547C  Title: DATA ANALYTICS MANAGEMENT  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: *ISM4940  Title: PROJECT MANAGEMENT INTERNSHIP  
Credit Hrs:  3.00  
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00  
Other: 144.00  Fees: 0.00  
Description: 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. All students must contact the Co-operative Education Office to obtain registration approval.

Area: FRL  FOREIGN LANGUAGE, MODERN  
CCN: *ITA1120  Title: ELEMENTARY ITALIAN I  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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 ITA 1121.

CCN: *ITA1121  Title: BEGINNING ITALIAN II  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Continuation of ITA1120. Further development of the basic skills in speaking, listening-comprehension, reading, writing, selected readings, and appreciation of diverse cultures. Classroom practice and supplemented by laboratory and multi-media activities are designed to develop and enhance communicative competence and cultural sensitivity. ITA1121 meets the foreign language and the International/Intercultural competency requirements.

CCN: *ITA2220  Title: INTERMEDIATE ITALIAN READING & CONVERSATION I  
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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. ITA2220 meets the International/Intercultural competency requirement.

Area: JOU  JOURNALISM
CCN: *JOU1100  Title: BASIC REPORTING
Credit Hrs: 3.00  Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: Pre-professional course providing fundamental instruction and practice in writing as a basis for all upper division courses in journalism. Includes writing in the Associated Press news style, leads, defining news, types of stories, organization of stories, policy and libel. Prerequisite: Permission of instructor.

CCN: *JOU1400L  Title: NEWSPAPER PRACTICUM I
Credit Hrs: 1.00  Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: Practical application of news writing and editing principles through work with college media. Instructor's approval required.

CCN: *JOU1401L  Title: NEWSPAPER PRACTICUM II
Credit Hrs: 2.00  Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: Continuation of JOU1400L. Students may take JOU1400L and JOU1401L during the same term. Instructor's approval required.

CCN: *JOU1402L  Title: NEWSPAPER PRACTICUM III
Credit Hrs: 2.00  Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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.

CCN: *JOU2200  Title: NEWSPAPER EDITING AND MAKEUP
Credit Hrs: 3.00  Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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. Instructor's approval

Area: COE  COOPERATIVE EDUCATION
CCN: *JOU2949  Title: CO OP WORK EXP
Credit Hrs:  3.00
Total Contact Hrs: 144.00 Lecture: 0.00 Lab: 0.00 Clinical: 0.00
Other: 144.00 Fees: 0.00
Description: 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.

Area: HUM  HUMANITIES TRAVEL STUDY
CCN: *JST1500  Title: SURVEY OF JEWISH CULTURE
Credit Hrs:  3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: A Survey of Jewish Culture (JST1500) is an examination of Jewish thought, Diaspora history, traditions and rituals, challenges of Jewish families and communities, and Jewish responses to the modern world.

Area: HIS  GENERAL HISTORY
CCN: *JST1700  Title: THE HOLOCAUST
Credit Hrs:  3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: The historical, political, literary, religious, and philosophical dimensions of the Holocaust.

CCN: *JST2400  Title: SURVEY OF JEWISH CIVILIZATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *JST2815  Title: HISTORY OF MODERN ISRAEL
Credit Hrs:  3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *LAH1004  Title: THE HISTORY OF THE TWO AMERICAS II
Credit Hrs:  3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *LAH1005  Title: THE HISTORY OF THE TWO AMERICAS II
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: PET  PHYSICAL EDUCATION THEORY
CCN: *LEI1000  Title: INTRODUCTION TO RECREATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course acquaints the individual with the recreation organization and opportunities for leaders in the field.

CCN: *LEI1260  Title: INTRODUCTION TO FITNESS AND OUTDOOR RECREATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course will introduce students to the career opportunities available in the field of outdoor recreation/adventure education.

CCN: *LEI1700  Title: RECREATION FOR SPECIAL GROUPS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: An overview of the characteristics and needs of members of special groups and how to plan and implement recreational activities appropriate for each group.

CCN: *LEI2401  Title: SPORTS AND FITNESS MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *LEI2731C  Title: SPORTS, FITNESS AND RECREATION THERAPY
Credit Hrs:  2.00
Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: An overview of various therapies that can be useful in a recreational setting.

CCN: *LEI2861  Title: SPORT FITNESS TECHNOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: LIT  LITERATURE
CCN: *LIT1172   Title: JEWISH LITERATURE II: HOLOCAUST TO PRESENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *LIT1370   Title: THE BIBLE AS LITERATURE
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. They will also discuss the Bible's historical context.

Area: ENC  ENGLISH COMPOSITION
CCN: *LIT2000   Title: INTRODUCTION TO LITERATURE
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This introductory course exposes students to the study of literature and a range of widely-recognized and emerging authors and works. Students will examine and interpret a diverse and representative body of works from genres such as fiction, poetry, drama, and creative non-fiction. These selections 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. LIT2000 is a writing credit course with. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. LIT2000 meets the International/Intercultural competency requirement.

Area: LIT  LITERATURE
CCN: *LIT2020   Title: INTRODUCTION TO THE SHORT STORY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. LIT2020 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. LIT2020 meets the International/Intercultural competency requirement.

CCN: *LIT2030  Title: INTRODUCTION TO POETRY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course serves as an introduction to the study of poetry. Students will be introduced to the conventions and elements that work to create a poem and make meaning. The relationship of poetry to the human experience will be explored. Texts should reflect a diverse selection of poetry from various cultures and time 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 forms, writers or groups within the art. LIT2030 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. LIT2030 meets the International/Intercultural competency requirement.

CCN: *LIT2110  Title: WORLD LITERATURE FROM ANCIENT WORLD THROUGH
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A survey of literature from the pre-Classical, Classical, post-Classical periods; Middle Ages, Renaissance, and early Colonial periods. The works of selected authors may include Homer, Sappho, Omar Khayyam, Plato, Sophocles, Tertullian, Confucius, Lao Tzu, Dante, Chaucer, Ibn Battuta, Boccaccio, Cervantes, and Shakespeare. Texts may also include excerpts from the Aztec Codices, Old and New Testaments, The Koran, Bhagavad-Gita, The Kebra Nagast, and The Arabian Nights among others. Upon successful completion of the course, students will comprehend the significant literary figures, mythologies, and historical and philosophical movements in world literature.
masterpieces. LIT2110 is a writing credit course. Students must earn a minimum grade of C to meet requirements of the Gordon Rule for writing. LIT2110 meets the International/Intercultural competency requirement.

CCN: *LIT2120   Title: WORLD LITERATURE FROM ENLIGHTENMENT TO MODERN
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 Molière, 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. LIT2120 is a writing course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. LIT2120 meets the International/Intercultural competency requirement.

CCN: *LIT2190   Title: CARIBBEAN LITERATURE
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. LIT 2190 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. LIT2190 meets the International/Intercultural competency requirement.

CCN: *LIT2310   Title: LITERATURE OF THE FANTASTIC: SCIENCE FICTION, CREDIT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: LIT2310 is a writing and survey course of the non-mimetic Literatures of Science Fiction, Fantasy, and Horror. Students will examine work that cover such topics as the future, technology, science, other worlds, paranormal life forms and occurrences, aberrant psychology and imaginary societies from a selection of speculative fiction narratives. This course will include a selection of diverse international and intercultural authors which may include Isaac Asimov, Ray Bradbury,

CCN: *LIT2330 Title: INTRODUCTION TO CHILDREN'S LITERATURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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, JK Rawling, Walter Dean Meyers, Matt de la Pena, Margarita Engle, Meg Medina, Nikki Grimes, Naomi Shihab Nye, and Andrea Davis Pinkney.

CCN: *LIT2341 Title: MYSTERY FICTION
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *LIT2510 Title: MALE FEMALE IMAGES IN LITERATURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Prerequisite: Eligibility for ENC1101

CCN: *LIT2935 Title: SEMINAR IN LITERATURE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: MAT MATHEMATICS
CCN: *MAC1105 Title: COLLEGE ALGEBRA
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course includes topics such as: solving linear and quadratic inequalities; solving systems of linear equations; solving quadratic, absolute value, radical, exponential, and logarithmic equations; and properties and analysis of functions and their graphs. Applications appear throughout the course.

CCN: *MAC1105C Title: COREQUISITE COLLEGE ALGEBRA
Credit Hrs: 5.00
Total Contact Hrs: 80.00 Lecture: 48.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course meets the needs of students with myriad levels of mathematical experience by providing support for learning prerequisite skills. This course is delivered as a combination of lecture along with structured activities intended to give students the experience of doing mathematics on their own or in groups with instructor guidance. The algebra objectives of the course include factoring polynomials; simplifying radicals; operations on rational expressions; writing equations of lines and circles; solving and graphing the solutions of linear and quadratic inequalities; solving systems of linear equations; solving quadratic, absolute value, radical, rational, exponential, and logarithmic equations; and properties and analysis of relations, functions and their graphs. Applications appear throughout the course.

CCN: *MAC1114 Title: TRIGONOMETRY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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 of the Mathematics Department or at least a grade of "C" in the prerequisite course is required.

CCN: *MAC1140   Title: PRE CALCULUS ALGEBRA
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course, in conjunction with MAC1114, is designed to prepare the student for the study of calculus. Topics include sequences, series, matrices, determinants, conic sections and systems of equations. Also included are polynomial, rational, exponential, and logarithmic functions and equations; and polynomial and rational and absolute value inequalities. Functions and graphs are emphasized. A graphing calculator may be required. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course is required.

CCN: *MAC1147   Title: PRECALCULUS ALGEBRA AND TRIGONOMETRY
Credit Hrs:   5.00
Total Contact Hrs: 80.00   Lecture: 80.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 of the Mathematics Department or at least a grade of "B" in the prerequisite course is required.

CCN: *MAC2233   Title: CALCULUS FOR BUSINESS, SOCIAL AND LIFE SCIENCES
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 of the Mathematics Department or at least a grade of "C" in the prerequisite course is required.

CCN: *MAC2311   Title: CALCULUS AND ANALYTICAL GEOMETRY I
Credit Hrs:   5.00
Total Contact Hrs: 80.00   Lecture: 80.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This is the first of a three-course sequence in calculus. Topics include: analytic, geometry,
functions, limits, continuity, derivatives and their applications, transcendental functions, antiderivatives, and definite integrals. Certain sections of this course may require the use of a graphing calculator. Recommendation of the Mathematics Department or at least a grade of "C" in each of the prerequisite courses is required.

CCN: *MAC2312   Title: CALCULUS AND ANALYTICAL GEOMETRY II
Credit Hrs:   5.00
Total Contact Hrs: 80.00   Lecture: 80.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 of the Mathematics Department or at least a grade of "C" in the prerequisite course is required.

CCN: *MAC2313   Title: CALCULUS AND ANALYTICAL GEOMETRY III
Credit Hrs:   5.00
Total Contact Hrs: 80.00   Lecture: 80.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This is the third of a three-course sequence in calculus. Topics include vectors in 3-space, three-dimensional surfaces, multivariate functions, cylindrical and spherical coordinates, multiple integrals, partial derivatives, and vector fields. A graphing calculator may be required in certain sections of this course. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course is required.

CCN: *MAD2104   Title: DISCRETE MATHEMATICS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: EDU   EDUCATION

CCN: *MAE3143   Title: INTERACTIVE MIDDLE SCHOOL MATHEMATICS PROJECTS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 8.15
Description: 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)

CCN: *MAE3941  Title: TEACHING MIDDLE AND SECONDARY SCHOOL MATHEMATICS
Credit Hrs:   3.00
Total Contact Hrs: 108.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 60.00  Fees: 4.75
Description: 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.

CCN: *MAE4310  Title: METHODS OF TEACHING MATH IN ELEMENTARY SCHOOL
Credit Hrs:   3.00
Total Contact Hrs: 63.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 15.00  Fees: 4.75
Description: This course provides content and methods designed for the development of knowledge, skills, and dispositions necessary to prepare pre-service teachers to teach elementary mathematics to students of diverse backgrounds. This course provides the pre-service teacher with an up-to-date perspective of being a professional within the field of mathematics education based on five content areas identified by Florida Standards. It is designed to involve the learner in an exploratory, hands-on/ minds-on problem solving classroom that encourages the pre-service teacher to problem solve, communicate with others about mathematical connections while working individually and within groups to complete activities and assignments.

CCN: *MAE4320  Title: METHODS OF TEACHING MATHEMATICS IN MIDDLE SCHOOL
Credit Hrs:   3.00
Total Contact Hrs: 63.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 15.00  Fees: 4.75
Description: 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.

CCN: *MAE4330   Title: METHODS OF TEACHING MATH IN SECONDARY SCHOOL
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 4.75
Description: 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.

CCN: *MAE4944   Title: STUDENT TEACHING IN MATHEMATICS
Credit Hrs:  12.00
Total Contact Hrs: 562.50   Lecture: 0.00   Lab: 0.00   Clinical: 0.00
Other: 562.50    Fees: 4.75
Description: 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."

CCN: *MAE4945   Title: STUDENT TEACHING IN MATHEMATICS
Credit Hrs:  12.00
Total Contact Hrs: 574.50   Lecture: 12.00   Lab: 0.00   Clinical: 562.50
Other: 0.00    Fees: 4.75
Description: 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."

Area: MAN  MANAGEMENT
CCN: *MAN2021   Title: INTRODUCTION TO MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: BUS  BUSINESS
CCN: *MAN2300   Title: INTRODUCTION TO HUMAN RESOURCE MANAGEMENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: MAN  MANAGEMENT
CCN: *MAN2542   Title: SUPPLY CHAIN MODELING
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MAN2604   Title: INTERNATIONAL BUSINESS ENVIRONMENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MAN3240   Title: ORGANIZATIONAL BEHAVIOR & LEADERSHIP
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MAN3303   Title: MANAGEMENT AND LEADERSHIP
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MAN3310   Title: HUMAN RESOURCE MANAGEMENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MAN3930   Title: SEMINAR IN BUSINESS AND MANAGEMENT
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MAN3931   Title: SEMINAR IN BUSINESS AND MANAGEMENT II
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MAN3932   Title: SEMINAR IN BUSINESS AND MANAGEMENT III
Credit Hrs:   1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MAN4102   Title: MANAGING CULTURAL DIVERSITY
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MAN4120   Title: LEADERSHIP CHALLENGES AND SUPERVISION
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MAN4320   Title: TRAINING AND DEVELOPMENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MAN4330 Title: COMPENSATION AND BENEFITS
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *MAN4504 Title: OPERATIONS MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course teaches the operational decision-making management techniques to improve the processes and productivity in organizations. Topics discussed are quality and outcomes, efficiency, demand and forecasting, work flow processes, inventory control, design of goods and services, customer experience and waiting lines, critical path and slack, positions and responsibilities of operations management, the tools and techniques available to assist in running operation, and the factors considered in the design of the systems. The course also covers managing a project from beginning to end, including how to identify needs, and define, assign, and track items, is addressed.

CCN: *MAN4570 Title: PROCUREMENT MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *MAN4720 Title: STRATEGIC MANAGEMENT AND POLICY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *MAN4900 Title: CAPSTONE PROJECT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *MAN4901   Title: APPLIED CONCEPTS IN HUMAN RESOURCE MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course focuses on the student reviewing and applying concepts in several functional areas of Human Resources.

CCN: *MAN4940   Title: INTERNSHIP
Credit Hrs: 3.00
Total Contact Hrs: 144.00   Lecture: 0.00   Lab: 0.00   Clinical: 0.00
Other: 144.00   Fees: 0.00
Description: This course provides a practical application of concepts learned during the BAS program.

Area: MAT  MATHEMATICS
CCN: *MAP2302   Title: DIFFERENTIAL EQUATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Topics include the classification, solution and application of differential equations, including numerical methods, Laplace transforms, and series solutions. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course is required.

Area: MAR  MARKETING
CCN: *MAR1011   Title: PRINCIPLES OF MARKETING FOR THE 21ST CENTURY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 "P's" 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.

CCN: *MAR2141   Title: INTERNATIONAL MARKETING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course examines basic marketing principles related to business in an international setting.

Area: BUS  BUSINESS
CCN: *MAR2644C   Title: DATA BASED MARKETING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 16.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: MAR  MARKETING
CCN: *MAR3231   Title: RETAIL MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *MAR3323   Title: INTEGRATED MARKETING COMMUNICATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
CCN: *MAR3524   Title: MARKETING ANALYTICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 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.
CCN: *MAR3802   Title: MARKETING MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *MAR4840  Title: SERVICES MARKETING
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

Area: MAT  MATHEMATICS
CCN: *MAS2103  Title: LINEAR ALGEBRA
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: A first course in linear algebra, emphasizing the algebra of matrices and vector spaces. Recommended for students majoring in mathematics or related areas. Recommendation of the Mathematics Department or at least a grade of "C" in each of the prerequisite courses is required.

Area: EDU  EDUCATION
CCN: *MAS3301  Title: ABSTRACT ALGEBRA WITH INTRODUCTORY NUMBER THEORY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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 bases upon these commonalities. Number theory topics that are foundational to this course will be studied as well.

Area: MAT  MATHEMATICS
CCN: MAT0022  Title: DEVELOPMENTAL MATHEMATICS
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: Mat0022 prepares students for college-level mathematics and mathematics-based courses. Topics include operations with whole numbers, integers,
fractions, decimals, rational, polynomial, and radical expressions, linear equations and inequalities in one variable, factoring, and basic linear graphing with the aid of a calculator. Problem solving involving real-life scenarios is an integral part of this course. This course teaches students to understand and communicate concepts of algebra in the language of mathematics. This course is non-transferable.

CCN: *MAT1033   Title: INTERMEDIATE ALGEBRA
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: BOT  BIOLOGICAL SCIENCE
CCN: *MCB2010   Title: MICROBIOLOGY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 microorganisms and the role of pathogenic organisms in causing diseases and infections. Prerequisites: Four hours of coursework in the biological sciences, including laboratory, and three hours of chemistry, with a minimum grade of "C". Placement by Testing Department or

CCN: *MCB2010L  Title: MICROBIOLOGY LABORATORY
Credit Hrs:   1.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 54.00
Description: This lab course will complement Lecture topics and include the application of fundamental techniques in the isolation cultivation, and identification of microorganisms. Prerequisite: Four hours of coursework in the biological sciences, including Laboratory, and three hours of chemistry, with a minimum grade of "C". Two 1.5 hour sessions per week. Placement by Testing Department or
Area: EDU EDUCATION
CCN: *MCB3020 Title: GENERAL MICROBIOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *MCB3020L Title: GENERAL MICROBIOLOGY LAB
Credit Hrs: 1.00
Total Contact Hrs: 48.00 Lecture: 0.00 Lab: 48.00 Clinical: 0.00
Other: 0.00 Fees: 5.00
Description: 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.

Area: EVR ENVIRONMENTAL SCIENCE
CCN: *MCB4652 Title: ENVIRONMENTAL MICROBIOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Overview of microorganisms in the environment including occurrence, abundance and distribution; processes of microbial interaction with the environment; and practices of applied environmental microbiology.

CCN: *MET1010 Title: ATMOSPHERIC PROCESSES
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: MAT MATHEMATICS
CCN: *MGF1106 Title: FOUNDATIONS OF MATHEMATICAL REASONING
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This general education course will include topics in logic, geometry, set theory, probability, and statistics. This course will also emphasize applications to real-world situations and the integration of topics from other disciplines, including, but not limited to, business and the physical sciences. Meets Area 5A of the General
Education Requirements for the A.A. degree and for
the A.S. degree.

CCN: *MGF1107   Title: SURVEY OF MATHEMATICS
Credit Hrs:   3.00
Total Contact Hrs: 48.00    Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This general education course will include 4
units. Mathematics of finance is required, and
at least 3 other units are to be selected from
among: linear and exponential functions; number
systems; history of mathematics; elementary
number theory; graph theory; and voting and
apportionment theory. This course will also
emphasize applications to real-world situations
and may include projects and the integration of
topics from other academic discipline, 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 and
for the A.S. degree.

Area: EDU  EDUCATION
CCN: *MHF4404   Title: HISTORY OF MATHEMATICS
Credit Hrs:   3.00
Total Contact Hrs: 48.00    Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: MHF4404 is 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.

Area: MAR  MARKETING
CCN: *MKA1021   Title: SALESMANSHIP
Credit Hrs:   3.00
Total Contact Hrs: 48.00    Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MKA1511   Title: ADVERTISING: TRADITIONAL AND NEW MEDIA
Credit Hrs:   3.00
Total Contact Hrs: 48.00    Lecture: 48.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MKA1930   Title: SEMINAR I: MARKETING IN PERSPECTIVE
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *MKA2042   Title: RETAILING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: BUS  BUSINESS
CCN: *MKA2701C  Title: VISUAL INFORMATICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 12.00   Lab: 36.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: MAR  MARKETING
CCN: *MKA2931   Title: SEMINAR II: RESEARCH IN MARKETING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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 I. Students will have the opportunity to develop leadership skills through participation in DECA and related activities.

CCN: *MKA2932   Title: SEMINAR III: MARKETING MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 I. Students will have the opportunity to develop leadership skills through participation in DECA and related activities.

Area: COE  COOPERATIVE EDUCATION
CCN: *MKA2949   Title: CO OP WORK EXP
Credit Hrs: 3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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.

Area: MLS  MEDICAL LABORATORY TECHNOLOGY
CCN: MLS2811L   Title: MICROBIOLOGY CLINICAL PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 48.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: MLS2930   Title: SEMINAR
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: MLT1022   Title: INTRODUCTION TO MEDICAL TECHNOLOGY
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: MLT1022L   Title: INTRODUCTION TO MEDICAL TECHNOLOGY LAB
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: MLT1040    Title: PHLEBOTOMY
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: MLT1044L   Title: PHLEBOTOMY CLINICAL
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 0.00    Clinical: 16.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: MLT2362    Title: HEMATOLOGY AND BODY FLUID ANALYSIS
Credit Hrs:   4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: MLT2362L   Title: HEMATOLOGY AND BODY FLUID ANALYSIS LAB
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: MLT2400    Title: MEDICAL MICROBIOLOGY
Credit Hrs:   4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Principles and methods used in clinical microbiology including isolation, identification, and antibiotic susceptibility testing of pathogenic bacteria. Introduction to medical parasitology, mycology, and virology.
CCN: MLT2400L  Title: MEDICAL MICROBIOLOGY LABORATORY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: MLT2530  Title: IMMUNOLOGY/IMMUNOHEMATOLOGY
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: MLT2530L  Title: IMMUNOLOGY/IMMUNOHEMATOLOGY LAB
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: MLT2807L  Title: IMMUNOHEMATOLOGY CLINICAL PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 48.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: MLT2809L  Title: HEMATOLOGY CLINICAL PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 48.00
Other: 0.00  Fees: 0.00
Description: 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.

**CCN: MLT2810L   Title: CLINICAL CHEMISTRY PRACTICUM**
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 48.00
Other: 0.00  Fees: 0.00
Description: 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.

**Area: JOU JOURNALISM**
**CCN: *MMC1000   Title: INTRO TO MASS COMMUNICATION**
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 origins, responsibilities, legalities, and careers. Media discussed may include print, publishing, radio, television, advertising, public relations, digital media, social media, and the movie, gaming and recording industries.

**Area: COMM COMMUNICATIONS**
**CCN: *MMC2121   Title: WRITING FUNDAMENTALS FOR COMMUNICATORS**
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 media may 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.

**Area: MAN MANAGEMENT**
**CCN: *MNA1161   Title: INTRODUCTION TO CUSTOMER SERVICE**
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: MNA1949    Title: INDUSTRY WORK EXPERIENCE
Credit Hrs: 27.00
Total Contact Hrs: 1300.00    Lecture: 0.00    Lab: 1300.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: BUS  BUSINESS

CCN: *MNA2329    Title: CASE STUDIES IN HR MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: MAN  MANAGEMENT

CCN: *MNA2345    Title: PRINCIPLES OF SUPERVISION
Credit Hrs: 3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: BUS  BUSINESS

CCN: *MNA2403    Title: INTRODUCTION TO HUMAN RESOURCES LAW & REGULATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

Area: COE  COOPERATIVE EDUCATION

CCN: *MNA2949    Title: CO-OP WORK EXPERIENCE
Credit Hrs: 3.00
Total Contact Hrs: 144.00    Lecture: 0.00    Lab: 144.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. Program Manager approval is required. All students must
contact the program manager to obtain registration approval.

Area: MIS  MILITARY SCIENCE
CCN: *MSL1001  Title: FOUNDATIONS OF OFFICERSHIP
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 16.00  Lab: 16.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *MSL1002  Title: BASIC LEADERSHIP
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 16.00  Lab: 16.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: Army ROTC: Presents fundamental leadership concepts and doctrine, student will practice basic skills that underlie effective problem solving and examine the officer experience.

CCN: *MSL2101  Title: INDIVIDUAL LEADERSHIP STUDIES
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: Army ROTC: Develops knowledge of self, self-confidence, individual leadership skills, problem solving and critical thinking skills, and improves communication and conflict resolution skills.

CCN: *MSL2102  Title: LEADERSHIP AND TEAMWORK
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: Army ROTC: Focuses on self-development by gaining knowledge of self and group processes and by challenging current beliefs, knowledge and skills.

Area: MAT  MATHEMATICS
CCN: *MTB1310  Title: APPLIED MATHEMATICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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 for this course cannot be used to meet the general education requirements for the Associate of Arts degree.

CCN: *MTB1370  Title: MATH TOPICS FOR HEALTH RELATED PROFESSIONS
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This course provides an intensive review of
mathematics operations involving fractions, decimals, percents, 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.

Area: MEMS MARINE ENG, MANGT & SEAMANSHIP
CCN: *MTE1004C  Title: INTRODUCTION TO MARINE TECHNOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 80.00  Lecture: 16.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 31.75
Description: 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.

CCN: *MTE1040C  Title: MARINE DIESEL ENGINES I
Credit Hrs:  3.00
Total Contact Hrs: 80.00  Lecture: 16.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 18.75
Description: 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.

CCN: *MTE1062C  Title: MARINE CORROSION & PREVENTION
Credit Hrs:  3.00
Total Contact Hrs: 80.00  Lecture: 30.00  Lab: 50.00  Clinical: 0.00
Other: 0.00  Fees: 36.75
Description: 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.

CCN: *MTE1073C  Title: GASOLINE ENGINE DIAGNOSTICS AND REPAIR
Credit Hrs:  3.00
Total Contact Hrs: 80.00  Lecture: 30.00  Lab: 50.00  Clinical: 0.00
Other: 0.00  Fees: 24.75
Description: 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.

CCN: *MTE1167C  Title: MARINE FUEL SYSTEMS, DIESEL & GAS
Credit Hrs:  3.00
Total Contact Hrs: 80.00   Lecture: 16.00   Lab: 64.00   Clinical: 0.00
Other: 0.00    Fees: 4.75
Description: Course provides theory, operation, and service of gasoline and diesel fuel systems as well as conventional systems and characteristics of fuels and their oil mixture; safety; marine carburetors, tank construction and installation; and troubleshooting test equipment using a dynometer.
CCN: *MTE1312C  Title: ADVANCED MARINE COMPOSITES, PAINTING & REFINISH
Credit Hrs: 3.00
Total Contact Hrs: 80.00   Lecture: 16.00   Lab: 64.00   Clinical: 0.00
Other: 0.00    Fees: 268.75
Description: Principles of advanced composite marine construction and repair. Painting and refinishing surface fundamentals.
CCN: *MTE1400C  Title: MARINE ELECTRICITY
Credit Hrs: 3.00
Total Contact Hrs: 80.00   Lecture: 16.00   Lab: 64.00   Clinical: 0.00
Other: 0.00    Fees: 93.75
Description: Basic electrical theory for both AC and DC circuits in marine systems. Application of electrical theory to the generating, starting and auxiliary circuits of the marine engine. Emphasis on theory of operation and repair of equipment in the field with special attention to marine problems in salt-water environments.
CCN: *MTE1542C  Title: AIR CONDITIONING AND REFRIGERATION SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 80.00   Lecture: 24.00   Lab: 56.00   Clinical: 0.00
Other: 0.00    Fees: 20.75
Description: This course develops skills in the student to prepare it, for the installation, reparation, diagnosis and inspection of systems such as: Auxiliary Power Systems, Hydraulic systems, Desalination systems and A/C Systems. The theory is complemented by projects in the laboratory, which help the student with the familiarization of the processes of installation and repair. At the end of the course the student will be ready to take the ABYC A/C Refrigeration certification exam.
CCN: *MTE1651C  Title: BASIC WELDING
Credit Hrs: 4.00
Total Contact Hrs: 96.00   Lecture: 38.00   Lab: 58.00   Clinical: 0.00
Other: 0.00    Fees: 144.75
Description: Provides basic welding knowledge and skills necessary to make repairs on ferrous materials used in the marine industry. Emphasis on metallurgy and uses of metals. The course is designed for the student with no welding
background and includes the safety and theory of gas welding, metal cutting, brazing with brass and silver alloys, AC/DC arc welding stick, and introduction to aluminum TIG and MIG welding.

CCN: *MTE2041C  Title: DIESEL ENGINES II
Credit Hrs: 3.00
Total Contact Hrs: 80.00  Lecture: 16.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 21.75
Description: Advanced theory of operation of diesel engines with an understanding of ABYC standards and recommended practices for systems.

CCN: *MTE2234C  Title: MARINE TRANSMISSION SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 80.00  Lecture: 16.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 47.75
Description: Course provides instruction on large outboard lower units, stern drives and marine gear assemblies of various manufacturers. Complete disassembly and reassembly procedures on outboard lower units is included. Students will study hydraulics in transmissions and the theory of propellers.

CCN: *MTE2420C  Title: ADVANCED ELECTRICAL SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 80.00  Lecture: 16.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 47.75
Description: Advanced electrical systems and troubleshooting procedures, diagnosis and repair of circuits and equipment malfunctions on marine vessels.

CCN: *MTE2490C  Title: MARINE ELECTRONICS
Credit Hrs: 3.00
Total Contact Hrs: 80.00  Lecture: 16.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 18.75
Description: Principles of on-board electronic systems, installation and troubleshooting of communication and navigational systems.

CCN: *MTE2541C  Title: MARINE AUXILIARY EQUIPMENT
Credit Hrs: 3.00
Total Contact Hrs: 80.00  Lecture: 16.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 24.75
Description: This course provides an introduction to centrifugal pumps; AC electricity and generators; hydraulic; air conditioning; and refrigeration systems. Theory of operation and fundamentals of servicing are taught with a strong emphasis on techniques.

CCN: MTE2949  Title: MARINE INTERNSHIP
Credit Hrs: 2.00
Total Contact Hrs: 100.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 100.00  Fees: 4.75
Description: Internship co-operative course providing on-the-job training at a local marine repair station. Includes required student outcomes which meet industry standards.

Area: EDU  EDUCATION
CCN: *MTG3212  Title: MODERN GEOMETRY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Thus some background with constructing direct proofs and proofs by contradiction is a necessary prerequisite to enroll in this course.

Area: MUE   MUSIC
CCN: *MUE1440   Title: STRING CLASS
Credit Hrs: 1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *MUE1450   Title: WOODWIND CLASS
Credit Hrs: 1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *MUH2019   Title: DEVELOPMENT OF AMERICAN POPULAR MUSIC
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. MUH2019 meets the International/Intercultural competency requirement.

CCN: *MUH2111   Title: MUSIC HISTORY AND LITERATURE I: MEDIEVAL-CLASSICAL
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: A survey course tracing the historical development of Western music from the Medieval to the Classical Periods. Emphasis is placed on major composers and their works. MUH2111 meets the International/Intercultural competency requirement.

CCN: *MUH2112   Title: MUSIC HISTORY AND LITERATURE II ROMANTIC TO MODERN
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. MUH2112 meets the International/Intercultural competency requirement.

CCN: *MUL2010  Title: MUSIC APPRECIATION
Credit Hrs:  3.00
Total Contact Hrs:  48.00  Lecture:  48.00  Lab:  0.00  Clinical:  0.00
Other:  0.00  Fees:  0.00
Description: 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. MUL2010 meets the International/Intercultural competency requirement.

CCN: *MUM1600C  Title: INTRODUCTION TO RECORDING STUDIO PROCEDURES
Credit Hrs:  3.00
Total Contact Hrs:  72.00  Lecture:  36.00  Lab:  36.00  Clinical:  0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *MUM2601C  Title: ADVANCED RECORDING ENGINEERING
Credit Hrs:  3.00
Total Contact Hrs:  72.00  Lecture:  36.00  Lab:  36.00  Clinical:  0.00
Other:  0.00  Fees:  83.00
Description: 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.

CCN: *MUM2602C  Title: MIXING, MASTERING AND DELIVERY
Credit Hrs:  3.00
Total Contact Hrs:  72.00  Lecture:  36.00  Lab:  36.00  Clinical:  0.00
Other:  0.00  Fees:  0.00
Description: Mixing, Mastering and Delivery

CCN: *MUM2620C  Title: ACOUSTICS AND AUDIO ELECTRONICS
Credit Hrs:  2.00
Total Contact Hrs:  72.00  Lecture:  36.00  Lab:  36.00  Clinical:  0.00
Other:  0.00  Fees:  0.00
Description: 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 lab time is required.

CCN: *MUM2640C  Title: POST PRODUCTION SOUND
Credit Hrs:  3.00
Total Contact Hrs: 72.00   Lecture: 36.00   Lab: 36.00   Clinical: 0.00
Other: 0.00    Fees: 64.00
Description: 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.
CCN: *MUM2700   Title: INTRODUCTION TO MUSIC BUSINESS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.
CCN: *MUM2730   Title: MUSIC MARKETING AND PROMOTION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.
CCN: *MUN1120   Title: BAND
Credit Hrs: 1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.
CCN: *MUN1180   Title: CONCERT BAND
Credit Hrs: 1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Open to all students, faculty and members of the community who play a band instrument. Chairs assigned by the conductor through audition. Three hours rehearsal weekly. May be taken four times for transfer credit.

CCN: *MUN1210C  Title: SYMPHONY ORCHESTRA
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: *MUN1280C  Title: ORCHESTRA
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: Open to all college students by audition. Three hours rehearsal weekly. May be taken four times for transfer credit.

CCN: *MUN1340C  Title: VOCAL ENSEMBLE
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.
Corequisite: MUN1310 or MUN1380

CCN: *MUN1341C  Title: SEAHAWK SINGERS
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.
Corequisite: MUN1310 or MUN1380

CCN: *MUN1380C  Title: BROWARD CHORAL SOCIETY
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.
CCN: *MUN1430C  Title: BRASS ENSEMBLE
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MUN1433C  Title: BRASS ENSEMBLE II
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of a select instrumental ensemble
that performs music written or arranged for Brass
instruments. Enrollment is determined by the
director through audition. Prerequisite: MUN1430C.

CCN: *MUN1440C  Title: PERCUSSION ENSEMBLE
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MUN1442C  Title: PERCUSSION ENSEMBLE II
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A select instrumental ensemble that performs
music written or arranged for percussion
instruments. Enrollment is determined by the
director through audition.

CCN: *MUN1460C  Title: CHAMBER ENSEMBLE
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MUN1463C  Title: CHAMBER ENSEMBLE II
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Prerequisite: MUN1460C.

CCN: *MUN1480C  Title: CLASSICAL GUITAR ENSEMBLE
Credit Hrs: 1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.

CCN: *MUN1481C  Title: JAZZ GUITAR ENSEMBLE
Credit Hrs:   1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.

CCN: *MUN1483C  Title: CLASSICAL GUITAR ENSEMBLE II
Credit Hrs:   1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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. Prerequisite: MUN1480C.

CCN: *MUN1488C  Title: JAZZ GUITAR ENSEMBLE II
Credit Hrs:   1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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. Prerequisite: MUN1481C.

CCN: *MUN1710C  Title: JAZZ ENSEMBLE
Credit Hrs:   1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.

CCN: *MUN1711   Title: JAZZ COMBO
Credit Hrs:   1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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.
CCN: *MUN1712  Title: COMBO LAB
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 32.00  Fees: 0.00
Description: 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.

CCN: *MUN1730C  Title: JAZZ/POP ENSEMBLE II
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Study and performance of music associated with the popular music, show presentation and dance band fields. Enrollment is determined by the director through audition. Prerequisite: MUN1780C.

CCN: *MUN1780C  Title: JAZZ/POP ENSEMBLE
Credit Hrs: 1.00
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MUS1360  Title: INTRODUCTION TO MUSIC TECHNOLOGY
Credit Hrs: 1.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MUS2332C  Title: LIVE SOUND REINFORCEMENT
Credit Hrs: 3.00
Total Contact Hrs: 72.00  Lecture: 36.00  Lab: 36.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *MUS2342C  Title: DIGITAL AUDIO MUSIC PRODUCTION
Credit Hrs: 3.00
Total Contact Hrs: 72.00  Lecture: 36.00  Lab: 36.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 lab assignments are performed outside of class reinforcing weekly lecture topics.

CCN: *MUS2344C  Title: INTRODUCTION TO MIDI SYSTEMS AND SOUND DESIGN
Credit Hrs:  3.00
Total Contact Hrs:  72.00   Lecture:  36.00   Lab:  36.00   Clinical:  0.00
Other:  0.00    Fees:  0.00
Description: 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.

CCN: *MUS2348C  Title: DIGITAL AUDIO MUSIC PRODUCTION 2
Credit Hrs:  3.00
Total Contact Hrs:  72.00   Lecture:  36.00   Lab:  36.00   Clinical:  0.00
Other:  0.00    Fees:  0.00
Description: 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.

CCN: *MUS2349C  Title: ADVANCED PROJECTS IN MUSIC PRODUCTION
Credit Hrs:  3.00
Total Contact Hrs:  96.00   Lecture:  48.00   Lab:  48.00   Clinical:  0.00
Other:  0.00    Fees:  77.00
Description: This course will offer the student a comprehensive overview of the music production process, including composing, tracking, mixing, advanced synthesis techniques and delivery.

CCN: *MUS2361C  Title: ADVANCED MIDI SYSTEMS AND SOUND DESIGN
Credit Hrs:  3.00
Total Contact Hrs:  72.00   Lecture:  36.00   Lab:  36.00   Clinical:  0.00
Other:  0.00    Fees:  0.00
Description: This course is designed to provide students further practice study in midi with particular focus on sound synthesis, sampling, remixing, and software synthesizers, as well as special emphasis on advanced techniques in midi sequencing, editing, multi-track recording, composition and arranging, plus a broad view of electronic music and its history.

CCN: *MUS2905  Title: INDEPENDENT STUDY: MUSIC
Credit Hrs:  3.00
Total Contact Hrs:  48.00   Lecture:  0.00   Lab:  48.00   Clinical:  0.00
Other:  0.00    Fees:  0.00
Description: 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.

CCN: *MUS2930  Title: MUSIC: SPECIAL TOPICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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.

CCN: *MUS2940  Title: MUSIC TECHNOLOGY CO-OP WORK EXPERIENCE  Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00  Other: 48.00  Fees: 0.00

Description: 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.

CCN: *MUT1001  Title: FUNDAMENTALS OF MUSIC  Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: A study of basic music fundamentals for the non-music or beginning music major who has had little to no background in music.

CCN: *MUT1111  Title: MUSIC THEORY I  Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: A course on music theory and related keyboard skills. Emphasis on diatonic materials.

CCN: *MUT1112  Title: MUSIC THEORY II  Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: A continuation of MUT1111.

CCN: *MUT1241  Title: EAR TRAINING AND SIGHT SINGING I  Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: A course in the development of sight singing and ear training skills.

CCN: *MUT1242  Title: EAR TRAINING AND SIGHT SINGING II  Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: A continuation of MUT1241.

CCN: *MUT1271C  Title: MUSICIANSHIP FOR MUSIC TECH. I  Credit Hrs: 3.00
Total Contact Hrs: 72.00  Lecture: 36.00  Lab: 36.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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.
CCN: *MUT1272C  Title: MUSICIANSHIP FOR MUSIC TECH. II
Credit Hrs:   3.00
Total Contact Hrs: 72.00   Lecture: 36.00   Lab: 36.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: A continuation of the concepts presented in MUT1271C. This course focuses on further development of music theory, sight singing and keyboard skills.
CCN: *MUT2116   Title: MUSIC THEORY III
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of MUT1112. Concentration on chromatic materials, musical forms, and 20th century techniques.
CCN: *MUT2117   Title: MUSIC THEORY IV
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of MUT2116.
CCN: *MUT2246   Title: EAR TRAINING AND SIGHT SINGING III
Credit Hrs:   1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: A continuation of MUT1242.
CCN: *MUT2247   Title: EAR TRAINING AND SIGHT SINGING IV
Credit Hrs:   1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of MUT2246.
CCN: *MUT2641   Title: JAZZ THEORY AND IMPROVISATION I
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: A study of the materials and structure of jazz music and the development of improvisational skills.
CCN: *MUT2642   Title: JAZZ THEORY AND IMPROVISATION II
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: A study of the materials and structure of jazz music and the development of improvisational skills.
Area: MUR   MUSIC APPLIED
CCN: *MVB1011   Title: PRE-PRINCIPAL TRUMPET
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in Trumpet for the music principal. One hour lesson per week and two hours practice daily.
Prerequisite: audition.
CCN: *MVB1012   Title: PRE-PRINCIPAL FRENCH HORN
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in French horn for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.
CCN: *MVB1013   Title: PRE-PRINCIPAL TROMBONE
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in trombone for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.
CCN: *MVB1014   Title: PRE-PRINCIPAL BARITONE HORN
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in baritone horn for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.
CCN: *MVB1015   Title: PRE-PRINCIPAL TUBA
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in tuba for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.
CCN: *MVB1021   Title: PRE-PRINCIPAL II - HORN BARITONE
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of college preparatory applied instruction in baritone horn for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVB1014. Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVB1022   Title: PRE-PRINCIPAL II - HORN
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of college preparatory applied instruction in French horn for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVB1023   Title: PRE-PRINCIPAL II, TROMBONE, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of college preparatory applied instruction in trombone for the music principal. One hour lesson per week and two hours practice
CCN: *MVB1024  Title: PRE-PRINCIPAL II, TRUMPET, CLASSICAL
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: Continuation of college preparatory applied instruction in trumpet for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVB1011. Corequisite: Any music course (MUx), other than Music Appreciation.

CCN: *MVB1025  Title: PRE-PRINCIPAL II, TUBA, CLASSICAL
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: Continuation of college preparatory applied instruction in trumpet for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVB1015. Corequisite: Any music course (MUx), other than Music Appreciation.

CCN: *MVB1211  Title: TRUMPET
Credit Hrs:  1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other:  0.00  Fees: 53.00
Description: One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB1212  Title: FRENCH HORN
Credit Hrs:  1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other:  0.00  Fees: 53.00
Description: One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB1213  Title: TROMBONE
Credit Hrs:  1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other:  0.00  Fees: 53.00
Description: One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB1214  Title: BARITONE HORN
Credit Hrs:  1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other:  0.00  Fees: 53.00
Description: One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB1215  Title: TUBA
Credit Hrs:  1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other:  0.00  Fees: 53.00
Description: One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
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<td>Description:</td>
<td>Applied instruction in tuba for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.</td>
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<tr>
<th>CCN: *MVB2011</th>
<th>Title: PRE-PRINCIPAL III TRUMPET, CLASSICAL</th>
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<tr>
<td>Credit Hrs:</td>
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<td>Description:</td>
<td>Continuation of college preparatory applied instruction in trumpet for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVB1024. Corequisite: Any music course (MUx), other than Music Appreciation.</td>
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<th>CCN: *MVB2013</th>
<th>Title: PRE-PRINCIPAL III, TROMBONE, CLASSICAL</th>
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Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: College preparatory applied instruction in trombone for the music principal. One hour lesson and two hours practice daily. Prerequisite: Audition and MVB1023. Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVB2015   Title: PRE-PRINCIPAL III, TUBA, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of college preparatory applied instruction in trumpet for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVB1025. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVB2026   Title: PRE-PRINCIPAL III; CLASSICAL, HORN
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of preparatory applied instruction in French horn for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVB1021. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVB2027   Title: PRE-PRINCIPAL III - HORN, BARITONE
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVB2221   Title: TRUMPET
Credit Hrs: 1.00
Total Contact Hrs: 8.00   Lecture: 0.00   Lab: 8.00   Clinical: 0.00
Other: 0.00   Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVB2222   Title: FRENCH HORN
Credit Hrs: 1.00
Total Contact Hrs: 8.00   Lecture: 0.00   Lab: 8.00   Clinical: 0.00
Other: 0.00   Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVB2223   Title: TROMBONE
Credit Hrs: 1.00
Total Contact Hrs: 8.00   Lecture: 0.00   Lab: 8.00   Clinical: 0.00
Other: 0.00   Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course
CCN: *MVB2224   Title: BARITONE HORN  
Credit Hrs: 1.00  
Total Contact Hrs: 8.00  
Lecture: 0.00  
Lab: 8.00  
Clinical: 0.00  
Other: 0.00  
Fees: 53.00  
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2225   Title: TUBA  
Credit Hrs: 1.00  
Total Contact Hrs: 8.00  
Lecture: 0.00  
Lab: 8.00  
Clinical: 0.00  
Other: 0.00  
Fees: 53.00  
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2311   Title: PRINCIPAL II - 2ND YEAR, TRUMPET, CLASSICAL  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  
Lecture: 0.00  
Lab: 16.00  
Clinical: 0.00  
Other: 0.00  
Fees: 0.00  
Description: Continuation of applied instruction in trumpet for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVB2321. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2313   Title: PRINCIPAL II - 2ND YEAR, TROMBONE, CLASSICAL  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  
Lecture: 0.00  
Lab: 16.00  
Clinical: 0.00  
Other: 0.00  
Fees: 0.00  
Description: Continuation of applied instruction in trombone for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVB2323. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2315   Title: PRINCIPAL II - 2ND YEAR, TUBA, CLASSICAL  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  
Lecture: 0.00  
Lab: 16.00  
Clinical: 0.00  
Other: 0.00  
Fees: 0.00  
Description: Continuation of applied instruction in tuba for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVB2325. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2321   Title: PRINCIPAL TRUMPET II  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  
Lecture: 0.00  
Lab: 16.00  
Clinical: 0.00  
Other: 0.00  
Fees: 107.00  
Description: Applied instruction in trumpet for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2322   Title: PRINCIPAL FRENCH HORN II  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  
Lecture: 0.00  
Lab: 16.00  
Clinical: 0.00  
Other: 0.00  
Fees: 107.00  
Description: Applied instruction in French horn for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.
of practice daily. Prerequisite: Audition.

Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2323  Title: PRINCIPAL TROMBONE II
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in trombone for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.

Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2324  Title: PRINCIPAL BARITONE HORN II
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in baritone horn for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.

Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2325  Title: PRINCIPAL TUBA II
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Applied instruction in tuba for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.

Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2326  Title: PRINCIPAL II-2ND YEAR; HORN, FRENCH
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of applied instruction in French horn for the music principal. One hour lesson per week and two hours of practice. Prerequisite: Audition and MVB2322.

Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVB2327  Title: PRINCIPAL II-2ND YEAR; HORN, BARITONE
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of applied instruction in baritone horn for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVB2324.

Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1006  Title: PRE-PRINCIPAL II - BASS, ELECTRIC
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuance of college preparatory applied instruction electric bass for the music principal. One hour lesson per week and two
hour practice daily. Prerequisite: Audition and MVJ2217. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVJ1008   Title: PRE-PRINCIPAL II - GUITAR, JAZZ
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: continuance of college preparatory applied instruction in jazz guitar for the music principal. One hour lesson per week and two hour practice daily. Prerequisite: Audition and MVJ2215. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVJ1010   Title: PRE-PRINCIPAL JAZZ PIANO
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in jazz piano for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

CCN: *MVJ1011   Title: PRE-PRINCIPAL JAZZ VOICE
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in jazz voice for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. Corequisite: Any (MUx) course other than Music Appreciation. Corequisite: MVK1211 or MVK2221.

CCN: *MVJ1013   Title: PRE-PRINCIPAL JAZZ GUITAR
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in jazz guitar for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

CCN: *MVJ1014   Title: PRE-PRINCIPAL ELECTRIC BASS
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in electric bass for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

CCN: *MVJ1016   Title: PRE-PRINCIPAL II PERCUSSION, JAZZ
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of college preparatory applied instruction in jazz percussion for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVJ1019. Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVJ1017  Title: PRE-PRINCIPAL II - PIANO, JAZZ
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of college preparatory applied instruction in jazz piano for the music principal. One hour lesson per week and two hours practice daily. Prequisite: Audition.

CCN: *MVJ1019  Title: PRE-PRINCIPAL JAZZ PERCUSSION
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: College preparatory applied instruction in jazz percussion for the music principal. One hour lesson per week and two hour practice daily. Prerequisite: audition. Corequisite: Any (MUx) course other than Music Appreciation. Corequisite: MVK1211 or MVK2221.

CCN: *MVJ1210  Title: JAZZ PIANO / SECONDARY
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1211  Title: JAZZ VOICE SECONDARY
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1213  Title: JAZZ GUITAR / SECONDARY
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1214  Title: ELECTRIC BASS / SECONDARY
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One hour lesson weekly and two hours of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1219  Title: JAZZ PERCUSSION
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1310  Title: PRINCIPAL JAZZ PIANO I
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in jazz piano for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1311 Title: PRINCIPAL JAZZ VOICE I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00

Description: Applied instruction in jazz voice for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1313 Title: PRINCIPAL JAZZ GUITAR I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00

Description: Applied instruction in jazz guitar for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1314 Title: PRINCIPAL ELECTRIC BASS I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00

Description: Applied instruction in electric bass for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ1319 Title: PRINCIPAL JAZZ PERCUSSION I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00

Description: Applied instruction in jazz percussion for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

CCN: *MVJ2010 Title: PRE-PRINCIPAL III- PIANO, JAZZ
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: College preparatory applied instruction in jazz piano for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVJ1017.

CCN: *MVJ2215 Title: PRE-PRINCIPAL III - GUITAR, JAZZ
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: Continuation of college preparatory applied instruction in jazz guitar for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVJ1008.
Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVJ2217  Title: PRE-PRINCIPAL III - BASS, ELECTRIC  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Continuation of college preparatory applied instruction in electric bass for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVJ1006. Corequisite: Any music (MUx) course other than Music Appreciation.  

CCN: *MVJ2218  Title: PRE-PRINCIPAL III - PERCUSSION, JAZZ  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Continuation of college preparatory applied instruction in jazz percussion for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVJ1016. Corequisite: Any music (MUx) course other than Music Appreciation.  

CCN: *MVJ2220  Title: JAZZ PIANO  
Credit Hrs: 1.00  
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00  
Other: 0.00  Fees: 53.00  
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.  

CCN: *MVJ2223  Title: JAZZ GUITAR  
Credit Hrs: 1.00  
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00  
Other: 0.00  Fees: 53.00  
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.  

CCN: *MVJ2224  Title: ELECTRIC BASS  
Credit Hrs: 1.00  
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00  
Other: 0.00  Fees: 53.00  
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.  

CCN: *MVJ2229  Title: JAZZ PERCUSSION  
Credit Hrs: 1.00  
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00  
Other: 0.00  Fees: 53.00  
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.  

CCN: *MVJ2320  Title: PRINCIPAL JAZZ PIANO II  
Credit Hrs: 1.00  
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 107.00  
Description: Applied instruction in jazz piano for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVJ2321  Title: PRINCIPAL II 2ND YEAR, PIANO, JAZZ
Credit Hrs:  1.00
Total Contact Hrs:  16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Applied instruction in jazz piano for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVJ2320. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ2322  Title: PRINCIPAL II-2ND YEAR; PERCUSSION, JAZZ
Credit Hrs:  1.00
Total Contact Hrs:  16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of applied instruction in jazz percussion for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVJ2323  Title: PRINCIPAL JAZZ GUITAR II
Credit Hrs:  1.00
Total Contact Hrs:  16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in jazz guitar for the music principal. One hour lesson weekly and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ2324  Title: PRINCIPAL ELECTRIC BASS II
Credit Hrs:  1.00
Total Contact Hrs:  16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in electric bass for the music principal. One hour lesson weekly and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVJ2325  Title: PRINCIPAL II-2ND YEAR; BASS, ELECTRIC
Credit Hrs:  1.00
Total Contact Hrs:  16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of applied instruction in electric bass for the music principal. One hour lesson weekly and two hours of practice daily. Prerequisite: Audition and MVJ2324. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVJ2326  Title: PRINCIPAL II-2ND YEAR; GUITAR, JAZZ
Credit Hrs:  1.00
Total Contact Hrs:  16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of applied instruction in jazz guitar for the music principal. One hour lesson weekly and two hours of practice daily. Prerequisite: Audition and MVJ2323. Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVJ2329  Title: PRINCIPAL JAZZ PERCUSSION II  
Credit Hrs:  1.00  
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 107.00  
Description: Applied instruction in jazz percussion for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. 
Corequisite:  Any music course (MUx) other than Music Appreciation. Corequisite: MVK1211 or MVK2221.  

CCN: *MVK1011  Title: PRE-PRINCIPAL PIANO  
Credit Hrs:  1.00  
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 107.00  
Description: College preparatory applied instruction in piano for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. Corequisite: Any (MUx) course other than Music Appreciation.  

CCN: *MVK1013  Title: PRE-PRINCIPAL ORGAN  
Credit Hrs:  1.00  
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 107.00  
Description: College preparatory applied instruction in organ for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.  

CCN: *MVK1021  Title: PRE-PRINCIPAL II-PIANO, CLASSICAL  
Credit Hrs:  1.00  
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Continuation of college preparatory applied instruction in piano for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than Music Appreciation.  

CCN: *MVK1023  Title: PRE-PRINCIPAL II; ORGAN, CLASSICAL  
Credit Hrs:  1.00  
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Continuation of college preparatory applied instruction in organ for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than Music Appreciation.  

Area: MUE  MUSIC  

CCN: *MVK1111  Title: PIANO CLASS  
Credit Hrs:  1.00  
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Basic piano skills for the beginning student.  

CCN: *MVK1112  Title: PIANO CLASS II  
Credit Hrs:  1.00  
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 53.00
Description: (Two hours weekly) basic piano skills for the intermediate student.

Area: MUR MUSIC APPLIED
CCN: *MVK1211 Title: PIANO
Credit Hrs: 1.00
Total Contact Hrs: 8.00 Lecture: 0.00 Lab: 8.00 Clinical: 0.00
Other: 0.00 Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVK1213 Title: ORGAN
Credit Hrs: 1.00
Total Contact Hrs: 8.00 Lecture: 0.00 Lab: 8.00 Clinical: 0.00
Other: 0.00 Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVK1311 Title: PRINCIPAL PIANO I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in piano for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVK1313 Title: PRINCIPAL ORGAN I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in organ for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVK2011 Title: PRE-PRINCIPAL III-PIANO, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Continuation of college preparatory applied instruction in piano for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition, MVK1011, and MVK1021. Corequisite: Any (MUx) course other than Music Appreciation.

CCN: *MVK2214 Title: PRE-PRINCIPAL III; ORGAN, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Continuation of college preparatory applied instruction in organ for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVK2221 Title: PIANO
Credit Hrs: 1.00
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Description:
- **SCONDARY II - 2ND YEAR, PIANO, CLASSICAL**: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
- **ORGAN**: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
- **PRINCIPAL PIANO II**: Applied instruction in piano for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.
- **PRINCIPAL II-PIANO, CLASSICAL**: Continuation of applied instruction in piano for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.
- **PRINCIPAL ORGAN II**: Applied instruction in organ for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.
- **PRINCIPAL II - 2ND YEAR; ORGAN, CLASSICAL**: Applied instruction in organ for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.
- **APPLIED MUSIC JAZZ COACHING**:
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied music jazz coaching on the student's instrument. One hour lesson per week and two hours practice daily. By permission of the instructor. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVO2070  Title: JAZZ COACHING II, APPLIED MUSIC
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Applied music jazz coaching on the student's instrument. One hour lesson per week and two hours practice daily. By permission of the instructor. Corequisite: Any music (MVO or MUx) other than Music Appreciation.
CCN: *MVP1011  Title: PRE-PRINCIPAL PERCUSSION
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: College preparatory applied instruction in percussion for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. Corequisite: Any (MUx) course other than Music Appreciation.
CCN: *MVP1021  Title: PRE-PRINCIPAL II - PERCUSSION
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of college preparatory applied instruction in percussion for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVP1011. Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVP1211  Title: PERCUSSION
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVP1311  Title: PRINCIPAL PERCUSSION I
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in percussion for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVP2212  Title: PRE-PRINCIPAL III - PERCUSSION, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of college preparatory applied instruction in percussion for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVP1211. Corequisite: Any music (MUx) course other than Music Appreciation.
principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVP2221   Title: PERCUSSION
Credit Hrs: 1.00
Total Contact Hrs: 8.00   Lecture: 0.00   Lab: 8.00   Clinical: 0.00
Other: 0.00   Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVP2321   Title: PRINCIPAL PERCUSSION II
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: Applied instruction in percussion for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVP2322   Title: PRINCIPAL II-2ND YEAR, PERCUSSION, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Continuation of applied instruction in percussion for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVB2321. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVS1011   Title: PRE-PRINCIPAL VIOLIN
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in violin for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

CCN: *MVS1012   Title: PRE-PRINCIPAL VIOLA
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in viola for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. Corequisite: Any (MUx) course other than Music Appreciation. Corequisite: MVK1211 or MVK2221.

CCN: *MVS1013   Title: PRE-PRINCIPAL CELLO
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 107.00
Description: College preparatory applied instruction in cello for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. Corequisite: Any (MUx) course other than Music Appreciation. Corequisite:
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<th>Course Code</th>
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**Description:**
College preparatory applied instruction in string bass for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

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**Description:**
College preparatory applied instruction in string bass for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

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**Description:**
College preparatory applied instruction in harp for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

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**Description:**
College preparatory applied instruction in classical guitar for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition.

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<th>Lecture</th>
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**Description:**
Continuation of college preparatory applied instruction in string bass for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. Corequisite: Any music (MUx) course other than Music Appreciation.

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<th>Title</th>
<th>Credit Hrs</th>
<th>Total Contact Hrs</th>
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**Description:**
Continuation of college preparatory applied instruction in classical guitar for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. Corequisite: Any music (MUx) course other than Music Appreciation.

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**Description:**
Continuation of college preparatory applied instruction in harp for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: audition. Corequisite: Any music (MUx) course other than Music Appreciation.

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Other: 0.00  Fees: 0.00

Description: Continuation of college preparatory applied instruction in viola for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVS1012. Corequisite: Any (MUx) course other than Music Appreciation.

CCN: *MVS1025  Title: PRE-PRINCIPAL II - VIOLIN, CLASSICAL
Credit Hrs: 1.00

Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: Continuation of college preparatory applied instruction in violin for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVS1011. Corequisite: Any (MUx) course other than Music Appreciation.

Area: MUE  MUSIC
CCN: *MVS1116  Title: GUITAR CLASS
Credit Hrs: 1.00

Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: Class instruction in beginning classical guitar techniques.

Area: MUR  MUSIC APPLIED
CCN: *MVS1211  Title: VIOLIN
Credit Hrs: 1.00

Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00

Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS1212  Title: VIOLA
Credit Hrs: 1.00

Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS1213  Title: CELLO
Credit Hrs: 1.00

Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00

Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS1214  Title: STRING BASS
Credit Hrs: 1.00

Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00

Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS1215  Title: HARP
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly, and one hour of practice daily. Course scheduled on demand.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS1216  Title: CLASSICAL GUITAR
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily.  Corequisite:  Any music course (MUx) other than Music Appreciation.

CCN: *MVS1311  Title: PRINCIPAL VIOLIN I
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in violin for the music principal. One hour lesson per week and two hours of practice daily.  Prerequisite:  Audition.

CCN: *MVS1312  Title: PRINCIPAL VIOLA I
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in viola for the music principal. One hour lesson per week and two hours of practice daily.  Prerequisite:  Audition.  Corequisite:  Any music course (MUx) other than Music Appreciation.

CCN: *MVS1313  Title: PRINCIPAL CELLO I
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Applied instruction in cello for the music principal. One hour lesson per week and two hours of practice daily.  Prerequisite:  Audition.  Corequisite:  Any music course (MUx) other than Music Appreciation.

CCN: *MVS1314  Title: PRINCIPAL STRING BASS I
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in string bass for the music principal. One hour lesson per week and two hours of practice daily.  Prerequisite:  Audition.

CCN: *MVS1315  Title: HARP
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: One hour lesson weekly, and two hours of practice daily. Class offered on demand.  Prerequisite:  Audition.  Corequisite:  Any music course (MUx) other than Music Appreciation.

CCN: *MVS1316  Title: PRINCIPAL CLASSICAL GUITAR I
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Applied instruction in classical guitar for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.

CCN: *MVS2011  Title: PRE-PRINCIPAL III - VIOLIN, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: Continuation of college preparatory applied instruction in violin for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVS1025. Corequisite: Any (MUx) course other than Music Appreciation.

CCN: *MVS2012  Title: PRE-PRINCIPAL III - VIOLA, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: College preparatory applied instruction in viola for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVS1024. Corequisite: Any music (MUx) course other than Music Appreciation.

Area: MUE  MUSIC
CCN: *MVS2126  Title: GUITAR CLASS
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 53.00

Description: Class instruction in intermediate guitar techniques.

Area: MUR  MUSIC APPLIED
CCN: *MVS2217  Title: PRE-PRINCIPAL III - CELLO
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: Continuation of college preparatory applied instruction in cello for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVS2221  Title: VIOLIN
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00

Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS2222  Title: VIOLA
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00

Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS2223  Title: CELLO
Credit Hrs: 1.00
Total Contact Hrs: 8.00    Lecture: 0.00    Lab: 8.00    Clinical: 0.00
Other: 0.00    Fees: 53.00
Description: One half hour lesson weekly and one hour of
practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVS2224   Title: STRING BASS
Credit Hrs: 1.00
Total Contact Hrs: 8.00    Lecture: 0.00    Lab: 8.00    Clinical: 0.00
Other: 0.00    Fees: 53.00
Description: One half hour lesson weekly and one hour of
practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVS2225   Title: HARP SECONDARY
Credit Hrs: 1.00
Total Contact Hrs: 8.00    Lecture: 0.00    Lab: 8.00    Clinical: 0.00
Other: 0.00    Fees: 53.00
Description: One half hour lesson weekly, and one hour practice
daily. Course scheduled on demand.
Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVS2226   Title: CLASSICAL GUITAR
Credit Hrs: 1.00
Total Contact Hrs: 8.00    Lecture: 0.00    Lab: 8.00    Clinical: 0.00
Other: 0.00    Fees: 53.00
Description: One half hour lesson weekly and one hour of
practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVS2311   Title: PRINCIPAL II - 2ND YEAR; VIOLIN, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00    Lecture: 0.00    Lab: 16.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Applied instruction in violin for the music principal. One hour lesson per week and two hours
practice daily. Prerequisite: Audition and MVS2321. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVS2312   Title: PRINCIPAL II - 2ND YEAR; VIOLA, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00    Lecture: 0.00    Lab: 16.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Continuation of applied instruction in viola for the music principal. One hour lesson per week and
two hours of practice daily. Prerequisite: Audition and MVS2322. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVS2317   Title: PRE-PRINCIPAL II - 2ND YEAR; CELLO
Credit Hrs: 1.00
Total Contact Hrs: 16.00    Lecture: 0.00    Lab: 16.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Continuation of applied instruction in cello for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVS2323. Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVS2318   Title: PRE-PRINCIPAL II - 2ND YEAR; BASS, STRING
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Continuation of applied instruction in string bass for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than music appreciation.

CCN: *MVS2319 Title: PRE-PRINCIPAL II - 2ND YEAR; HARP
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Continuation of applied instruction in harp for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVS2321 Title: PRINCIPAL VIOLIN II
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in violin for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS2322 Title: PRINCIPAL VIOLA II
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in viola for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS2323 Title: PRINCIPAL CELLO II
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in cello for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS2324 Title: PRINCIPAL STRING BASS II
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in string bass for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS2325 Title: PRINCIPAL SOPHOMORE HARP
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in harp for the music
principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS2326 Title: PRINCIPAL CLASSICAL GUITAR II
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in classical guitar for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVS2329 Title: PRE-PRINCIPAL II - 2ND YEAR; GUITAR, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Continuation of applied instruction in classical guitar for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVS2326. Corequisite: Any (MUx) course other than Music Appreciation.

CCN: *MVV1011 Title: PRE-PRINCIPAL VOICE
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 53.00
Description: College preparatory applied instruction in voice for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: audition. Corequisite: Any (MUx) course other than Music Appreciation. Corequisite: MVK1211 or MVK221.

CCN: *MVV1012 Title: PRE-PRINCIPAL II - VOICE, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Continuation of college preparatory applied instruction in voice for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVV1011. Corequisite: Any (MUx) course other than Music Appreciation.

Area: MUE MUSIC
CCN: *MVV1111 Title: VOICE CLASS
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 0.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Fundamentals of voice production and building of solo repertoire. Term I, II and III.

Area: MUR MUSIC APPLIED
CCN: *MVV1211 Title: VOICE
Credit Hrs: 1.00
Total Contact Hrs: 8.00 Lecture: 0.00 Lab: 8.00 Clinical: 0.00
Other: 0.00 Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
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Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuance of college preparatory applied instruction in oboe for the music principal.
One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVW1012.
Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVW1025  Title: PRE-PRINCIPAL II, SAXOPHONE, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuation of college preparatory applied instruction in saxophone for the music principle.
One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVW1010.
CCN: *MVW1211  Title: FLUTE
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVW1212  Title: OBOE
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVW1213  Title: CLARINET
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVW1214  Title: BASSOON
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVW1215  Title: SAXOPHONE
Credit Hrs: 1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
CCN: *MVW1311  Title: PRINCIPAL FLUTE I
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in flute for the music principal. One hour lesson per week and two hours
of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW1312 Title: PRINCIPAL OBOE I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in oboe for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW1313 Title: PRINCIPAL CLARINET I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in clarinet for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW1314 Title: PRINCIPAL BASSOON I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in bassoon for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW1315 Title: PRINCIPAL SAXOPHONE I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: Applied instruction in saxophone for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition.
Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2015 Title: PRE-PRINCIPAL III - SAXOPHONE, CLASSICAL
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 107.00
Description: College preparatory applied instruction in saxophone for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVW1025.

CCN: *MVW2216 Title: PRE-PRINCIPAL III - FLUTE
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Continuation of college preparatory applied instruction in flute for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVW1023. Corequisite: Any music (MUx) course other than Music Appreciation.
CCN: *MVW2217   Title: PRE-PRINCIPAL III - OBOE
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Continuation of college preparatory applied instruction in oboe for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVW1024. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVW2218   Title: PRE-PRINCIPAL III - CLARINET
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Continuation of college preparatory applied instruction in clarinet for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVW1022. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVW2219   Title: PRE-PRINCIPAL III - BASSOON
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 0.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Continuation of college preparatory applied instruction in bassoon for the music principal. One hour lesson per week and two hours practice daily. Prerequisite: Audition and MVW1022. Corequisite: Any music (MUx) course other than Music Appreciation.

CCN: *MVW2221   Title: FLUTE
Credit Hrs:   1.00
Total Contact Hrs: 8.00   Lecture: 0.00   Lab: 8.00   Clinical: 0.00
Other: 0.00    Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2222   Title: OBOE
Credit Hrs:   1.00
Total Contact Hrs: 8.00   Lecture: 0.00   Lab: 8.00   Clinical: 0.00
Other: 0.00    Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2223   Title: CLARINET
Credit Hrs:   1.00
Total Contact Hrs: 8.00   Lecture: 0.00   Lab: 8.00   Clinical: 0.00
Other: 0.00    Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2224   Title: BASSOON
Credit Hrs:   1.00
Total Contact Hrs: 8.00   Lecture: 0.00   Lab: 8.00   Clinical: 0.00
Other: 0.00    Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course
CCN: *MVW2225  Title: SAXOPHONE
Credit Hrs:  1.00
Total Contact Hrs: 8.00  Lecture: 0.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 53.00
Description: One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2321  Title: PRINCIPAL FLUTE II
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in flute for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2322  Title: PRINCIPAL OBOE II
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in oboe for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2323  Title: PRINCIPAL CLARINET II
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in clarinet for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2324  Title: PRINCIPAL BASSOON II
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in bassoon for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2325  Title: PRINCIPAL SAXOPHONE II
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 107.00
Description: Applied instruction in saxophone for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2326  Title: PRINCIPAL II - 2ND YEAR, FLUTE
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Continuance of applied instruction in bassoon for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVW2321. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2327 Title: PRINCIPAL II - 2ND YEAR, OBOE
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: Continuance of applied instruction in bassoon for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVW2322. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2328 Title: PRINCIPAL II - 2ND YEAR, CLARINET
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: Continuance of applied instruction in bassoon for the music principal. One hour lesson per week and two hours of practice daily. Prerequisite: Audition and MVW2323. Corequisite: Any music course (MUx) other than Music Appreciation.

CCN: *MVW2329 Title: PRINCIPAL II - 2ND YEAR, BASSOON
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 0.00 Lab: 16.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: This course is designed to introduce the student to the field of nuclear medicine. Upon completion of this course, the 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.

Area: NMT NUCLEAR MEDICINE TECHNOLOGY
CCN: NMT1002 Title: INTRODUCTION TO NUCLEAR MEDICINE TECHNOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00

Description: 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.

CCN: NMT1430 Title: RADIATION SAFETY AND RADIOBIOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: NMT1630    Title: NUCLEAR PHYSICS AND MATHEMATICAL
Credit Hrs: 2.00

Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: NMT1714    Title: NUCLEAR MEDICINE PATHOLOGY
Credit Hrs: 3.00

Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: NMT1804    Title: NUCLEAR MEDICINE CLINICAL EDUCATION I
Credit Hrs: 2.00

Total Contact Hrs: 256.00  Lecture: 0.00  Lab: 0.00  Clinical: 256.00
Other: 0.00  Fees: 18.00

Description: 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.

CCN: NMT1814    Title: NUCLEAR MEDICINE CLINICAL EDUCATION II
Credit Hrs:   2.00
Total Contact Hrs: 256.00  Lecture: 0.00  Lab: 0.00  Clinical: 256.00
Other: 0.00  Fees: 18.00
Description: 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.

CCN: NMT1900    Title: NUCLEAR MEDICINE IMAGING ANATOMY
Credit Hrs:   2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NMT2061    Title: NUCLEAR MEDICINE SEMINAR
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NMT2102    Title: NUCLEAR MEDICINE ADMINISTRATION
Credit Hrs:   1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NMT2130    Title: NUCLEAR MEDICINE RADIOPHARMACY
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 radiopharmaceutical 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. Prerequisite: instructor approval

CCN: NMT2534    Title: NUCLEAR MEDICINE INSTRUMENTATION
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NMT2713    Title: NUCLEAR MEDICINE METHODOLOGY I
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NMT2713L    Title: NUCLEAR MEDICINE METHODOLOGY I LAB
Credit Hrs:   1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NMT2723    Title: NUCLEAR MEDICINE METHODOLOGY II
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NMT2723L    Title: NUCLEAR MEDICINE METHODOLOGY II LAB
Credit Hrs:   1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 47.00
Description: 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.

CCN: NMT2779  Title: INTRODUCTION TO MULTIPLE MODALITIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NMT2824  Title: NUCLEAR MEDICINE CLINICAL EDUCATION III
Credit Hrs: 3.00
Total Contact Hrs: 384.00  Lecture: 0.00  Lab: 0.00  Clinical: 384.00
Other: 0.00  Fees: 18.00
Description: 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.

CCN: NMT2834  Title: CLINICAL EDUCATION IV
Credit Hrs: 3.00
Total Contact Hrs: 384.00  Lecture: 0.00  Lab: 0.00  Clinical: 384.00
Other: 0.00  Fees: 18.00
Description: The 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.

CCN: NMT2960  Title: NUCLEAR MEDICINE ADVANCE APPLICATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: NEST NEST SEAHAWK ACADEMY
CCN: NST0001  Title: BUILDING YOUR NEST-TRANSITION FROM HIGH SCHOOL
Credit Hrs: 1.00
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<th>Title</th>
<th>Credit Hrs</th>
<th>Total Contact Hrs</th>
<th>Lecture</th>
<th>Lab</th>
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Area: NUR Nursing Technology
CCN: NUR1020 Title: Nursing Process I
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This is a theoretical course for the beginning nursing student. Nursing Process I provides 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.

CCN: NUR1020L   Title: NURSING PROCESS I CLINICAL LAB
Credit Hrs: 2.00
Total Contact Hrs: 112.00   Lecture: 0.00   Lab: 0.00   Clinical: 112.00
Other: 0.00   Fees: 93.90
Description: A clinical course for the beginning nursing student. Initially skills are learned in simulation lab 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.

CCN: NUR1210   Title: NURSING PROCESS II
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: NUR1210L   Title: NURSING PROCESS II CLINICAL LAB
Credit Hrs: 2.00
Total Contact Hrs: 112.00   Lecture: 0.00   Lab: 0.00   Clinical: 112.00
Other: 0.00   Fees: 88.90
Description: 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.

CCN: NUR1220    Title: HEALTH ALTERATIONS I
Credit Hrs:   3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: NUR1220L    Title: HEALTH ALTERATIONS I CLINICAL LAB
Credit Hrs:   2.00
Total Contact Hrs: 112.00    Lecture: 0.00    Lab: 0.00    Clinical: 112.00
Other: 0.00    Fees: 65.90
Description: Health Alterations I Clinical Lab 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.

CCN: NUR1304L    Title: TRANSITION PEDIATRIC NURSING CLINIC LAB
Credit Hrs:   1.00
Total Contact Hrs: 56.00    Lecture: 0.00    Lab: 0.00    Clinical: 56.00
Other: 0.00    Fees: 61.90
Description: 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.

CCN: NUR1310    Title: PEDIATRIC NURSING
Credit Hrs:   3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This pediatric course is designed to provide an understanding of the nursing care of children from birth through adolescence including health promotion, disease prevention, illness management, and health restoration. The major focus of this course is directed at utilizing the nursing process in providing nursing care to the pediatric client, family, and community.
CCN: NUR1310L  Title: PEDIATRIC NURSING LAB
Credit Hrs:  2.00
Total Contact Hrs: 112.00  Lecture: 0.00   Lab: 0.00   Clinical: 112.00
Other:  0.00    Fees: 68.90
Description: 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.

CCN: NUR1400L  Title: TR HLTHCARE OF WOMEN CLINICAL LAB
Credit Hrs:  1.00
Total Contact Hrs: 56.00  Lecture: 0.00   Lab: 0.00   Clinical: 56.00
Other:  0.00    Fees: 61.90
Description: 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.

CCN: NUR1421  Title: HEALTH CARE OF WOMEN
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other:  0.00    Fees: 0.00
Description: 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.

CCN: NUR1421L  Title: HEALTH CARE OF WOMEN CLINICAL LABORATORY
Credit Hrs:  2.00
Total Contact Hrs: 112.00  Lecture: 0.00   Lab: 0.00   Clinical: 112.00
Other:  0.00    Fees: 67.90
Description: 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.

CCN: NUR1500L  Title: TRANSITION PSYCHIATRIC NURSING CLINICAL LAB
Credit Hrs:  1.00
Total Contact Hrs: 56.00  Lecture: 0.00  Lab: 0.00  Clinical: 56.00
Other: 0.00  Fees: 61.90
Description: 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.

CCN: NUR1520  Title: NURSING CARE OF THE PSYCHIATRIC PATIENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: NUR1520L  Title: NURSING CARE OF THE PSYCHIATRIC PATIENT CL LAB
Credit Hrs: 2.00
Total Contact Hrs: 112.00  Lecture: 0.00  Lab: 0.00  Clinical: 112.00
Other: 0.00  Fees: 65.90
Description: 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.

CCN: NUR2000  Title: TRANSITION NURSING I
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 provides 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. Pre-requisite: Licensed Practical Nurse - Completion of a Licensed Practical Nurse Program and successfully pass the PN-NCLEX Examination with active licensure.

CCN: NUR2000L  Title: TRANSITION NURSING I CLINICAL LAB
Credit Hrs: 2.00
Total Contact Hrs: 112.00  Lecture: 0.00  Lab: 0.00  Clinical: 112.00
Other: 0.00  Fees: 61.90
Description: 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.

CCN: NUR2221 Title: HEALTH ALTERATIONS II
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: NUR2221L Title: HEALTH ALTERATIONS II CLINICAL LAB
Credit Hrs: 2.00
Total Contact Hrs: 112.00 Lecture: 0.00 Lab: 0.00 Clinical: 112.00
Other: 0.00 Fees: 74.90
Description: 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.

CCN: NUR2222 Title: HEALTH ALTERATIONS III
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: NUR2222L Title: HEALTH ALTERATIONS III CLINICAL LAB
Credit Hrs: 2.00
Total Contact Hrs: 112.00 Lecture: 0.00 Lab: 0.00 Clinical: 112.00
Other: 0.00 Fees: 65.90
Description: 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.

CCN: NUR2801    Title: TRANSITION NURSING IV    Credit Hrs: 3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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 preparedness.

CCN: NUR2801L    Title: TRANSITION NURSING IV CLINICAL LAB    Credit Hrs: 2.00
Total Contact Hrs: 112.00    Lecture: 0.00    Lab: 0.00    Clinical: 112.00
Other: 0.00    Fees: 372.90
Description: 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.

CCN: NUR2811    Title: TRENDS, PRACTICES, AND ROLES    Credit Hrs: 3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: NUR2811L    Title: TRENDS, PRACTICES, AND ROLES CLINICAL LAB    Credit Hrs: 2.00
Total Contact Hrs: 112.00    Lecture: 0.00    Lab: 0.00    Clinical: 112.00
Other: 0.00    Fees: 372.90
Description: 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.

CCN: *NUR3069   Title: ADVANCED HEALTH ASSESSMENT
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: 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. Departmental approval is required for all students to enroll.

CCN: *NUR3069L  Title: ADVANCED HEALTH ASSESSMENT_LAB
Credit Hrs:   1.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: 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. Departmental approval is required to enroll.

CCN: *NUR3119   Title: NURSING CONCEPTS AND THEORIES
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: 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. Departmental approval is required to enroll.

CCN: *NUR3167  Title: NURSE AS A SCHOLAR
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Departmental approval is required to enroll.

CCN: *NUR3678  Title: NURSING CARE OF VULNERABLE POPULATIONS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 interrelationships 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. Departmental approval is required to enroll.
CCN: *NUR3805   Title: NURSING, ROLES, DIMENSIONS, AND PERSPECTIVES
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. Departmental approval is required for students to enroll.

CCN: *NUR4128   Title: PATHOPHYSIOLOGY/PHARMACOLOGY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. Departmental approval is required for enrollment.

CCN: *NUR4165   Title: NURSING RESEARCH
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. Departmental approval is required to enroll.
CCN: *NUR4195  Title: END OF LIFE PALLIATIVE CARE  
Credit Hrs: 3.00  
Total Contact Hrs: 80.00  Lecture: 32.00  Lab: 0.00  Clinical: 48.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: *NUR4284  Title: DYNAMICS AND CONTEMPORARY ISSUES IN AGING  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: *NUR4636  Title: COMMUNITY HEALTH NURSING  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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. Departmental approval is required to enroll.

CCN: *NUR4636L  Title: COMMUNITY HEALTH NURSING PRACTICUM  
Credit Hrs: 2.00  
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 0.00  Clinical: 96.00  
Other: 0.00  Fees: 0.00  
Description: 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. Departmental approval is required to enroll.

CCN: *NUR4667   Title: NURSING PERSPECTIVES AND GLOBAL TRENDS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. Departmental approval is required to enroll.

CCN: *NUR4826   Title: ETHICAL AND LEGAL ASPECTS OF NURSING
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course focuses on the ethical and legal aspects of nursing; exploring ethical issues, ethical decision making, and legal accountability in various populations. Departmental approval is required for student to enroll.

CCN: *NUR4827   Title: PRINCIPLES OF NURSING LEADERSHIP AND MANAGEMENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course provides a forum for the examination and discussion of concepts, theories, and principles of leading and managing for the nurse manager to be effective in today's diverse and global health care environment. Grounded in evidence-based, best practices, the ethical, economic, legal and political context of contemporary health systems are examined in terms of role development, interpersonal skills, networking, facilitation of groups, provision of quality care and quality improvement, budgeting and resource allocation. Health care systems, outcomes management, clinical judgment as it pertains to nursing management, and health and safety goals are emphasized across practice settings. Departmental approval is required to enroll.
CCN: *NUR4870   Title: NURSING INFORMATICS
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course is designed to explore the use of informatics in nursing practice and its role in enhancing client care to provide quality patient outcomes. The course provides an overview of various operating systems, hardware, software and network configurations. With a focus on health information systems and the electronic health record; the course also examines issues related to the protection of the privacy, confidentiality and security of information in health care environments and the potential use of social networking tools used to communicate health related information. Departmental approval is required to enroll.

CCN: *NUR4945   Title: NURSING CAPSTONE
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Professional practice of the Registered Nurse focuses on health promotion; risk reduction; direct and indirect care of clients, families, groups, and populations; and providing the human interface between health care systems and the client. Following the completion of all required RN-BSN, general education, state of Florida and program pre-requisite course requirements, the Nursing Capstone requires the student to demonstrate the competencies consistent with program outcomes and to synthesize the knowledge, skills, concepts and theories he/she has attained in a written and approved professional portfolio. Departmental approval is required to enroll.

CCN: *NUR4945L  Title: NURSING CAPSTONE PRACTICUM
Credit Hrs:   2.00
Total Contact Hrs: 96.00   Lecture: 0.00    Lab: 0.00    Clinical: 96.00
Other: 0.00    Fees: 0.00
Description: Professional practice of the Registered Nurse focuses on health promotion; risk reduction; direct and indirect care of clients, families, groups, and populations; and providing the human interface between health care systems and the client. Following the completion of all required RN-BSN, general education, state of Florida and program pre-requisite course requirements, the Nursing Capstone Practicum requires the student to demonstrate the competencies consistent with program outcomes. Departmental approval is required to enroll.

Area: OCE   OCEANOGRAPHY
CCN: *OCE1001   Title: INTRODUCTORY OCEANOGRAPHY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: A survey of the four classic disciplines of the ocean sciences: geological oceanography, chemical oceanography, physical oceanography, and biological oceanography. Course will focus on the basic principles of the ocean sciences and stress the interdisciplinary nature of oceanography.
CCN: *OCE1001L   Title: OCEANOGRAPHY LABORATORY
Credit Hrs:  1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 2.00
Description: This laboratory course will include methods for collection, interpretation and presentation of oceanographic data. The topics covered will include problem solving in all aspects of ocean science to understand how the hydrosphere, lithosphere, biosphere and atmosphere of our planet functions and interacts and demonstrate a basic understanding of the unifying principles and processes that link geology, chemistry, physics, meteorology and biology to the study of the world ocean.
Area: EVR ENVIRONMENTAL SCIENCE
CCN: *OCE3008   Title: ADVANCED OCEANOGRAPHY
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Oceanography is an interdisciplinary science course which considers the biological, physical, and chemical components and processes within the earth's oceans. Topical sections include: the history and processes (plate tectonics) which have shaped ocean basins; the ocean constituents (seawater & sediments); physical processes which drive circulation processes (currents, waves, & tides); life in the oceans play in controlling global climate; and environmental concerns. The course will emphasize oceanographic processes and their effects on the global system.
CCN: *OCE3064C   Title: MARINE CONSERVATION AND RESTORATION BIOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 1 or more of the remaining units covered based on faculty expertise.
Area: OPT VISION CARE
CCN: OPT1110   Title: PHYSICAL AND GEOMETRIC OPTICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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. The principles relate to the effect these ophthalmic devices have in correcting refractive errors of human eye.

CCN: OPT1110L  Title: PHYSICAL AND GEOMETRIC OPTICS LAB
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00  Other: 0.00  Fees: 16.00

Description: 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.

CCN: OPT1150  Title: OPHTHALMIC LENSES
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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.

CCN: OPT1150L  Title: OPHTHALMIC LENSES LAB
Credit Hrs: 2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00  Other: 0.00  Fees: 5.00

Description: 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.

CCN: OPT1210  Title: ANATOMY AND PHYSIOLOGY OF THE EYE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00

Description: 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.

CCN: OPT1330  Title: ORIENTATION TO VISION CARE
Credit Hrs: 2.00
Description: 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.

CCN: OPT1450    Title: OPHTHALMIC DISPENSING
Credit Hrs: 2.00

Description: 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.

CCN: OPT1450L   Title: OPHTHALMIC DISPENSING LAB
Credit Hrs: 2.00

Description: 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.

CCN: OPT2060    Title: OPHTHALMIC MANAGEMENT POLICY AND PROCEDURES
Credit Hrs: 3.00

Description: 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.

CCN: OPT2090    Title: ORIENTATION TO VISION CARE CLINIC
Credit Hrs: 2.00

Description: 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 date, administrative procedures, and techniques in patient handling under the close supervision of
Perform pre-testing ocular health evaluations in clinical setting.

CCN: OPT2375 Title: REFRACTOMETRY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: OPT2420 Title: EYEWEAR FABRICATION I
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 16.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course presents a review of the theory of ophthalmic surfing and finishing procedures. Students acquire knowledge to arrange single vision and multifocal lenses, use sensometers and lens clocks, operate project-o-markers for lens layout, select or fabricate frame patterns, and utilize several systems for surfing and edging lenses for ophthalmic frames.

CCN: OPT2420L Title: EYEWEAR FABRICATION I LAB
Credit Hrs: 2.00
Total Contact Hrs: 64.00 Lecture: 0.00 Lab: 64.00 Clinical: 0.00
Other: 0.00 Fees: 23.00
Description: In this laboratory course students will gain practical experience in ophthalmic surfing and finishing procedures. Students will fabricate single vision and multifocal lenses: use sensometers and lens clocks: operate project-o-markers for lens layout: select or fabricate frame patterns: and utilize several systems for surfing and edging lenses for ophthalmic frames.

CCN: OPT2421 Title: EYEWEAR FABRICATION II
Credit Hrs: 1.00
Total Contact Hrs: 16.00 Lecture: 16.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Advanced techniques in measurement, fabrication and verification of single vision and multifocal lenses. Theory of ophthalmic surfing and finishing procedures from written specifications ensuring that current ANSI and FDA standards are exceeded.

CCN: OPT2421L Title: EYEWEAR FABRICATION II LAB
Credit Hrs: 2.00
Total Contact Hrs: 64.00 Lecture: 0.00 Lab: 64.00 Clinical: 0.00
Other: 0.00 Fees: 23.00
Description: 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.

CCN: OPT2460    Title: OPHTHALMIC DISPENSING CLINIC I
Credit Hrs:  2.00
Total Contact Hrs: 80.00  Lecture: 0.00  Lab: 0.00  Clinical: 80.00
Other: 0.00    Fees: 8.15
Description: 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.

CCN: OPT2461    Title: OPHTHALMIC DISPENSING CLINIC II
Credit Hrs:  2.00
Total Contact Hrs: 80.00  Lecture: 0.00  Lab: 0.00  Clinical: 80.00
Other: 0.00    Fees: 4.75
Description: 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.

CCN: OPT2500    Title: CONTACT LENS THEORY
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: OPT2500L    Title: CONTACT LENS THEORY LAB
Credit Hrs:  2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: OPT2800L    Title: VISION CARE CLINIC I
Credit Hrs:  2.00
Total Contact Hrs: 80.00  Lecture: 0.00  Lab: 0.00  Clinical: 80.00
Other: 0.00    Fees: 12.90
Description: 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.

CCN: OPT2830L Title: CONTACT LENS CLINIC I
Credit Hrs: 2.00
Total Contact Hrs: 120.00 Lecture: 0.00 Lab: 0.00 Clinical: 120.00
Other: 0.00 Fees: 35.90
Description: 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.

CCN: OPT2831L Title: CONTACT LENS CLINIC II
Credit Hrs: 2.00
Total Contact Hrs: 80.00 Lecture: 0.00 Lab: 0.00 Clinical: 80.00
Other: 0.00 Fees: 35.90
Description: 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.

CCN: OPT2875 Title: OPHTHALMIC DISPENSING PRACTICUM I
Credit Hrs: 2.00
Total Contact Hrs: 120.00 Lecture: 0.00 Lab: 0.00 Clinical: 120.00
Other: 0.00 Fees: 12.90
Description: This is an externship in an approved ophthalmic practice with a retail dispensing optical. The student will gain a working knowledge of ophthalmic frame, lens stock, inventory system, layout and blocking, chemical and heat treating, edging, surfacing, tinting, retail sells, dispensing, assembly and alignment of eyewear according to the written prescription. Students are placed for 16 weeks to gain outside externship experience under the tutelage of a Florida Licensed Dispensing Optician. Site preceptor and course professor will work closely to ensure student success.

Area: HLTH HEALTH OCCUPATIONS
CCN: OPT2876 Title: OPHTHALMIC DISPENSING PRACTICUM II
Credit Hrs: 2.00
Total Contact Hrs: 120.00 Lecture: 0.00 Lab: 0.00 Clinical: 120.00
Other: 0.00 Fees: 12.90
Description: This is the second phase of student 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.

Area: OPT VISION CARE
CCN: OPT2879  Title: REFRACTOMETRY LAB
Credit Hrs: 2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 0.00  Clinical: 64.00
Other: 0.00  Fees: 12.90
Description: 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.

Area: EVR  ENVIRONMENTAL SCIENCE
CCN: *ORH2527  Title: FLORIDA FLORA AND ECOSYSTEMS LANDSCAPES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This is an introductory environmental science course designed to teach students plant ID and environmental aspects of Florida's diverse ecosystems.

Area: BIO  BIOLOGY
CCN: *ORH4256  Title: NUTRITIONAL MONITORING AND MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: OST  OFFICE SYSTEM TECHNOLOGY
CCN: *OST1100C  Title: KEYBOARDING & DOCUMENT PROCESSING I
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course offers an introduction to the keyboard with development of fundamental techniques, skill development, and business correspondence and document processing.

CCN: *OST1103C  Title: BASIC KEYBOARDING
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 4.00  Lab: 12.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course offers an introduction to the keyboard with development of fundamental techniques.

CCN: *OST1257C  Title: MEDICAL TERMINOLOGY FOR THE ADMINISTRATIVE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 12.00  Lab: 36.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *OST1330  Title: BUSINESS ENGLISH
Credit Hrs:   1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course provides a refresher course in punctuation and capitalization.

CCN: *OST1355C  Title: RECORDS MANAGEMENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *OST2053  Title: SUCCESSFUL JOB SEARCH
Credit Hrs:   1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course presents a hands-on, interactive study of interview and employability skills and focuses on the keys to career success.

CCN: *OST2335  Title: COMMUNICATIONS IN THE WORKFORCE
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *OST2455C  Title: MEDICAL BILLING AND CODING I
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *OST2456C  Title: MEDICAL BILLING AND CODING II
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *OST2464C  Title: MEDICAL OFFICE COMPUTER APPLICATION
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 40.00  Lab: 8.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: *OST2501  Title: OFFICE MANAGEMENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: *OST2764C  Title: ADVANCED WORD
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: 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.

CCN: *OST2835C  Title: DATABASE MANAGEMENT FOR THE OFFICE
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 12.00  Lab: 36.00  Clinical: 0.00
Other: 0.00  Fees: 0.00

Description: Course prepares students to solve business problems by moving beyond the basic skills to think critically about realistic business situations using database management.

Area: COE  COOPERATIVE EDUCATION
CCN: *OST2949  Title: CO OP WK EXP
Credit Hrs:  3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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.
Area: POS  POLITICAL SCIENCE

CCN: *PAD2002  Title: INTRODUCTION TO PUBLIC ADMINISTRATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This introductory course examines the
governmental context of public administration
including political values, bureaucratic politics,
leadership and intergovernmental 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.
Area: BIO  BIOLOGY

CCN: *PCB3023  Title: MOLECULAR AND CELLULAR BIOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A study of cell structure and function with
emphasis on the properties of intracellular
organelles and their molecular constituents.
Includes photosynthesis.
Area: EDU  EDUCATION

CCN: *PCB3063  Title: GENETICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
Area: BIO  BIOLOGY

CCN: *PCB3063L  Title: GENETICS LAB
Credit Hrs:  1.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 20.00
Description: 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.

Area: EVR  ENVIRONMENTAL SCIENCE
CCN: *PCB4043  Title: INTRODUCTION TO ECOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *PCB4303  Title: FRESHWATER ECOSYSTEMS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *PCB4341C  Title: ADVANCED BIOLOGICAL FIELD TECHNIQUES
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 24.00  Lab: 24.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Emphasis on techniques used in Biological field work. Units 1-3 will be covered with 1 or more of remaining units covered based on faculty expertise.

Area: BIO  BIOLOGY
CCN: *PCB4454C  Title: BIOSTATISTICS WITH LAB
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 48.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: PEL  PHYSICAL EDUC ACTIVITIES
CCN: *PEL1041C  Title: RECREATION ACTIVITIES
Credit Hrs:  2.00
Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: An overview of outdoor and indoor games and activities for various age groups in a recreational setting.

CCN: *PEM1116C  Title: FUNCTIONAL WELLNESS
Credit Hrs:  2.00
Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Functional Wellness is about muscles, bones,
joints, nerves, and everything else that's responsible for your physical ability to move. It's your mechanical well-being. It is about optimizing your ability to do the activities that you need to do and that you want to do, without being hampered by pain or injury. It is a course designed to identify students to a comprehensive range of topics and information relating to the various aspects of functional wellness including physical, social, emotional, intellectual, spiritual, financial, occupational, intercultural and environmental. Pilates, yoga, functional training, suspension training, agility drills, plyometric exercises, fitness bar training, spinning, nutrition, stress management, principles of health and fitness, prevention of cardiovascular disease, assessment and weight management. PEM1116C meets the International/Intercultural competency requirement.

CCN: *PEM1121C  Title: BEGINNING YOGA EXERCISES
Credit Hrs:   1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course will provide a study of basic yoga movements and positions to increase flexibility, strength, and relaxation. A holistic approach to health and stress management is emphasized. Coeducational.

CCN: *PEM1131C  Title: WEIGHT TRAINING
Credit Hrs:   2.00
Total Contact Hrs: 48.00   Lecture: 16.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: A course primarily designed and organized for students of all ages to learn how to assess, create, and apply a personal weight/resistance training plan to improve their muscular strength, muscular endurance, and flexibility. Eight interrelated dimensions of Wellness will be discussed in conjunction with how a personal weight/resistance training plan can help students work toward achieving optimal 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. PEM1131C meets the International/Intercultural competency requirement.

CCN: *PEM1141C  Title: AEROBIC WELLNESS
Credit Hrs:   2.00
Total Contact Hrs: 48.00   Lecture: 16.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: Aerobic Wellness emphasizes the importance of knowledge, attitudes, and practices relating to cardiovascular health. It is a course designed to provide students with an opportunity to strengthen their cardiovascular system, decrease
body fat and firm muscles. Students will be exposed to a broad range of issues and information relating to the various aspects of aerobic/cardiovascular wellness including physical, social, emotional, intellectual, spiritual, and environmental wellness. 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. PEM1141C meets the International/Intercultural competency requirement.

CCN: *PEN1121  Title: BEGINNING SWIMMING
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Coeducational.

CCN: *PEN1171  Title: AQUATIC WELLNESS
Credit Hrs:  2.00
Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *PEN2122  Title: INTERMEDIATE SWIMMING
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Coeducational.
Area: PET  PHYSICAL EDUCATION THEORY

CCN: *PET1303  Title: FOUNDATIONS OF EXERCISE SCIENCE
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *PET2622C  Title: CARE/PREVENTION/ATHLETIC INJURIES
Credit Hrs:   2.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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. .
Area: GRA  GRAPHIC DESIGN TECHNOLOGY

CCN: *PGY1801C  Title: PHOTOSHOP DESIGN
Credit Hrs:   3.00
Total Contact Hrs: 72.00   Lecture: 32.00   Lab: 40.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *PGY1802C  Title: DIGITAL PHOTOGRAPHY
Credit Hrs:   3.00
Total Contact Hrs: 72.00   Lecture: 32.00   Lab: 40.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.
Area: ART  ART, FINE AND APPLIED

CCN: *PGY2401C  Title: PHOTOGRAPHY I
Credit Hrs:   3.00
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00
Other: 0.00    Fees: 13.00
Description: 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).

CCN: *PGY2404C  Title: PHOTOGRAPHY II
Credit Hrs:   3.00
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00  
Other: 0.00    Fees: 4.00  
Description: 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).

CCN: *PGY2800C   Title: FINE ARTS DIGITAL PHOTOGRAPHY  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00   Lecture: 32.00   Lab: 64.00   Clinical: 0.00  
Other: 0.00    Fees: 4.00  
Description: 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. 

CCN: *PGY2905   Title: INDEPENDENT STUDY: PHOTOGRAPHY  
Credit Hrs:  3.00  
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00  
Other: 0.00    Fees: 4.00  
Description: 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.

Area: PHI PHILOSOPHY  
CCN: *PHI1100   Title: INTRODUCTORY LOGIC  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00  
Other: 0.00    Fees: 0.00  
Description: 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. PHI1100 is a writing credit course.  
Students must earn a minimum grade of C to meet  
the requirements of the Gordon Rule for writing. 

CCN: *PHI2010   Title: INTRODUCTION TO PHILOSOPHY  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00    Clinical: 0.00  
Other: 0.00    Fees: 0.00  
Description: 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. PHI2010 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. PHI2010 meets the International/Intercultural competency requirement.

CCN: *PHI2600  Title: INTRODUCTION TO ETHICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course is an introduction to the nature of ethics, ethical theories, and specific ethical issues. PHI2600 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. PHI2600 meets the International/Intercultural competency requirement.

CCN: *PHI2930  Title: SPECIAL TOPICS: PHILOSOPHY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Transfer credit is the prerogative of the receiving institution.

Area: PHT  PHYSICAL THERAPY
CCN: PHT1020  Title: THERAPEUTIC COMMUNICATION FOR THE PT ASSISTANT
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: PHT1103  Title: ANATOMY FOR THE PT ASSISTANT
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: PHT1103L  Title: ANATOMY FOR PHYSICAL THERAPIST ASSISTING LAB
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: PHT1200  Title: INTRODUCTION TO PHYSICAL THERAPY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: PHT1200L  Title: INTRODUCTION TO PHYSICAL THERAPY LAB
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 40.00
Description: 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.

CCN: PHT1211  Title: DISABILITIES AND THERAPEUTIC PROCEDURES I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Course introduces the student to the theory and practical application 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.

CCN: PHT1211L  Title: DISABILITIES AND THERAPEUTIC PROCEDURES I LAB
Credit Hrs:  2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other:  0.00  Fees: 70.00
Description: 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.

CCN: PHT1300  Title: SURVEY OF PATHOLOGICAL DEFICITS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: 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.

CCN: PHT1310  Title: SURVEY OF MUSCULOSKELETAL DEFICITS
Credit Hrs:  2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees: 0.00
Description: Course introduces 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.

CCN: PHT1350  Title: BASIC PHARMACOLOGY FOR PT ASSISTANTS
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: PHT1801L  Title: CLINICAL PRACTICE I
Credit Hrs: 2.00
Total Contact Hrs: 120.00  Lecture: 0.00  Lab: 0.00  Clinical: 120.00
Other: 0.00  Fees: 12.90
Description: 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 based upon clinical performance as well as other grading criteria detailed in the course syllabus. This course is the first in a series of three clinical practicums. Students are expected to perform at a novice level.

CCN: PHT2120  Title: APPLIED KINESIOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: PHT2120L  Title: APPLIED KINESIOLOGY LAB
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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 lab 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.

CCN: PHT2162  Title: SURVEY OF NEUROLOGICAL DEFICITS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: PHT2224  Title: DISABILITIES & THERAPEUTIC PROCEDURES II
Credit Hrs:  4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: PHT2224L   Title: DISABILITIES AND THERAPEUTIC PROCEDURES II LAB
Credit Hrs:   2.00
Total Contact Hrs: 64.00 Lecture: 0.00 Lab: 64.00 Clinical: 0.00
Other: 0.00 Fees: 40.00
Description: 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.

CCN: PHT2704   Title: REHABILITATION PROCEDURES
Credit Hrs:   3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: PHT2704L   Title: REHABILITATIVE PROCEDURES LAB
Credit Hrs:   1.00
Total Contact Hrs: 32.00 Lecture: 0.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Laboratory sessions for Rehabilitative Procedures (PHT2704) 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. Residual limb 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. Students are expected to demonstrate competency in developing and carrying out appropriate interventions for a patient with
neurological deficits. Practical examinations are completed.

CCN: PHT2810L    Title: CLINICAL PRACTICE II
Credit Hrs:    5.00
Total Contact Hrs: 300.00  Lecture: 0.00  Lab: 0.00  Clinical: 300.00
Other: 0.00  Fees: 12.90
Description: 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. Students receive a satisfactory/fail grade based upon clinical performance as well as other grading criteria detailed in the course syllabus. This course is the second in a series of three clinical practicums. Students are expected to perform at an intermediate level.

CCN: PHT2820L    Title: CLINICAL PRACTICE III
Credit Hrs:    5.00
Total Contact Hrs: 300.00  Lecture: 0.00  Lab: 0.00  Clinical: 300.00
Other: 0.00  Fees: 12.90
Description: The course is the last in a series of three clinical practicums. Students are expected to perform at an entry level. The course involves full time student assignment to a local clinical facility. A clinical journal, a case study report, and a research project are required. Weekly online discussion forums facilitate critical thinking, peer review, and managing clinical situations at the entry level. Students may 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. Students receive a satisfactory/fail grade based upon clinical performance as well as other grading criteria detailed in the course syllabus.

CCN: PHT2931    Title: TRANSITION SEMINAR
Credit Hrs:    2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 79.00
Description: 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.

Area: PHY PHYSICS
CCN: *PHY1001  Title: APPLIED PHYSICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: PHY1001 is 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.

CCN: *PHY1001L  Title: APPLIED PHYSICS LAB
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: PHY1001L 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 PHY1001L. Students will create experiment reports using analysis in algebra.

CCN: *PHY2048  Title: GENERAL PHYSICS WITH CALCULUS I
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: PHY2048 is part one of a comprehensive course in physics outlining mechanics, heat, and wave motion using analysis in calculus.

CCN: *PHY2048L  Title: GENERAL PHYSICS WITH CALCULUS I LAB
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 10.00
Description: 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.

CCN: *PHY2049  Title: GENERAL PHYSICS WITH CALCULUS II
Credit Hrs: 4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: PHY2049 is part two of a comprehensive physics course outlining electricity, magnetism and optics using analysis in calculus.

CCN: *PHY2049L   Title: GENERAL PHYSICS WITH CALCULUS II LAB
Credit Hrs: 1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 20.00

Description: 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.

CCN: *PHY2053L   Title: GENERAL PHYSICS I LAB
Credit Hrs: 1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 10.00

Description: PHY2053L 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.

CCN: *PHY2054L   Title: GENERAL PHYSICS II LAB
Credit Hrs: 1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 20.00

Description: Laboratory experiences designed to accompany the topics under study in PHY2054. One two hour period per week. Special fee charged. Placement by Testing Department.

Area: LEA   LEGAL ASSISTING

CCN: *PLA1003   Title: INTRODUCTION TO PARALEGAL STUDIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: This course provides an overview of the training and duties of the paralegal. Also included is a discussion of legal terminology, research techniques, pertinent litigation documents and legal software.

CCN: *PLA1104C  Title: LAW LIBRARY/RESEARCH
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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. Co-requisite: Program Manager's approval.

CCN: *PLA1201C  Title: CIVIL LITIGATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 40.00   Lab: 8.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: This course covers the basic concepts of Civil Litigation. Discussions involve individual and entity liability in relation to the specific acts committed and explore the current upcoming trends in legal technology in the area of civil litigation.

CCN: *PLA1303   Title: CRIMINAL LITIGATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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 process and problems involved in the conduct of trial proceedings. Co-requisite: Program Manager's approval.

CCN: *PLA1435   Title: CORPORATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00

Description: 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. Co-requisite: Program Manager's approval.

CCN: *PLA1600C   Title: PROBATE PRACTICE
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 40.00   Lab: 8.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 using legal software is included. Co-requisite: Program Manager's approval.
CCN: *PLA1610C  Title: PROCEDURES FOR REAL ESTATE TITLE CLOSING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Co-requisite: Program Manager's approval.
CCN: *PLA1800   Title: DOMESTIC RELATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Co-requisite: Program Manager's approval.
CCN: *PLA1841   Title: IMMIGRATION LAW
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Co-requisite: Program Manager's approval.
CCN: *PLA2114C   Title: LEGAL WRITING AND DRAFTING
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 40.00   Lab: 8.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Co-requisite: Program Manager's approval.
CCN: *PLA2466C   Title: DEBTOR/CREDITOR RELATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 40.00   Lab: 8.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course provides an in-depth study of Debtor/Creditor law and the legal software used in the practice area. 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. Requires Program Manager's approval.
CCN: *PLA2762C   Title: PARALEGAL OFFICE SYSTEMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 24.00   Lab: 24.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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, ethics, and electronic discovery.
CCN: PLA2930   Title: SELECTED TOPICS IN PARALEGAL STUDIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course will explore a selection of topics and trends of special interest in the legal field.
CCN: PLA2940   Title: PLA PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 144.00   Lecture: 0.00   Lab: 0.00   Clinical: 0.00
Other: 144.00   Fees: 0.00
Description: 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.
Area: BIO   BIOLOGY
CCN: *PLP3002C   Title: FUNDAMENTALS OF PLANT PATHOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 32.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Principles and practices of plant pathology.
Area: ETE   ENGINEERING TECHNOLOGY
CCN: *PMT1203C   Title: INTRODUCTION TO MACHINING
Credit Hrs: 3.00
Total Contact Hrs: 64.00   Lecture: 32.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course presents a practical overview of machine shop practices and equipment. It
includes an introduction to blue print reading, the use of precision measuring tools, and use of basic metal fabrication equipment. Safety and quality practices receive strong emphasis in this introductory course.

CCN: *PMT2213C  Title: ADVANCED MACHINING 1  
Credit Hrs: 3.00  
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: This course concentrates on sheet metal fabrication techniques, riveting tools, and the care and use of manual lathes and mills. The course teaches machining theory and concepts and requires the student to safely and competently use manual machining equipment.

CCN: *PMT2214C  Title: ADVANCED MACHINING 2  
Credit Hrs: 3.00  
Total Contact Hrs: 80.00  Lecture: 48.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: This course concentrates on the theory and use of computer numeric control (CNC) lathes and vertical milling machines including computer numerical programming, linear and polar coordinate systems, machine part programming and tool paths.

Area: POS  POLITICAL SCIENCE  
CCN: *POS2041  Title: NATIONAL GOVERNMENT  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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). POS2041 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.

CCN: *POS2112  Title: STATE & LOCAL GOVERNMENT  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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. POS2112 is a writing credit course. Students must earn a minimum grade of C to meet
meet the requirements of the Gordon Rule for writing.

CCN: *POS2601    Title: THE AMERICAN CONSTITUTION
Credit Hrs:    3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: *POS2949    Title: COLLEGE INTERNSHIP IN POLITICAL SCIENCE
Credit Hrs:    1.00
Total Contact Hrs: 16.00    Lecture: 0.00    Lab: 0.00    Clinical: 0.00
Other: 16.00    Fees: 0.00
Description: 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 commit between 10-20 hours per week to the internship.

Area: PSC  PHYSICAL SCIENCE

CCN: *PSC1121    Title: PHYSICAL SCIENCES SURVEY
Credit Hrs:    3.00
Total Contact Hrs: 48.00    Lecture: 48.00    Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: PSC 1121 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.

CCN: *PSC1121L    Title: PHYSICAL SCIENCES LABORATORY
Credit Hrs:    1.00
Total Contact Hrs: 32.00    Lecture: 0.00    Lab: 32.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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 PSC1121. Students will create experiment reports using analysis in algebra.

CCN: *PSC2910    Title: DIRECTED INDEPENDENT RESEARCH
Credit Hrs:    0.00
Total Contact Hrs: 48.00    Lecture: 0.00    Lab: 0.00    Clinical: 0.00
Other: 48.00    Fees: 0.00
Description: 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
CCN: *PSC2914  Title: INDEPENDENT RESEARCH IN THE PHYSICAL SCIENCES
Credit Hrs:  0.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 48.00  Fees: 0.00
Description: 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. Instructor permission required. The instructor may incorporate any 5 or more objectives as appropriate to the given student project.

Area: EVR  ENVIRONMENTAL SCIENCE
CCN: *PSC3639C  Title: MARINE BENTHIC ECOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 32.00  Lab: 16.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Open to advanced undergraduates with consent of instructor and completion of prerequisites or with permission of instructor(s). The course consists of lectures, substantial readings and field sessions. This course introduces students to the basic ecological aspects of corals and coral reef ecosystems. Content includes ecological principles such as biophysical components, diversity and resilience. Identification of coral reef species from the Caribbean and Florida are examined. The field study portion of the class illustrates concepts from the lectures and give students practical experience in basic coral reef.

CCN: *PSC4473C  Title: SCIENTIFIC DIVING
Credit Hrs:  0.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: The Scientific Diving course provides background and hands-on training to promote safe and productive scientific diving. This course is designed to meet the American Academy of Underwater Sciences (AAUS) standards for the training and certification of scientific divers and the operation of scientific diving programs. Content includes dive planning and safety, equipment, instruction for underwater surveys, data management and reporting. Certifications in Cardiopulmonary Resuscitation (CPR), Automated External Defibrillator (AED), First Aid, and Oxygen Administration comprise a portion of the course.

Area: PSC  PHYSICAL SCIENCE
CCN: *PSC4912  Title: INDEPENDENT RESEARCH IN THE PHYSICAL SCIENCES
Credit Hrs:  0.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 48.00  Fees: 0.00
Description: 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. Instructor permission required. The instructor may incorporate any 5 or more objectives as appropriate to the given student project.

Area: EVR  ENVIRONMENTAL SCIENCE
CCN: *PSC4930  Title: SPECIAL TOPICS IN PHYSICAL SCIENCE
Credit Hrs:  0.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 48.00  Fees: 0.00
Description: Course centers around topics of current interest or special interest to students or instructors. Topics or focus may vary from semester to semester.

Area: PSC  PHYSICAL SCIENCE
CCN: *PSC4948  Title: SENIOR INTERNSHIP
Credit Hrs:  3.00
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 144.00  Fees: 0.00
Description: 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. EVR BS Department approval required.

Area: PSY  PSYCHOLOGY
CCN: *PSY2012  Title: GENERAL PSYCHOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. PSY2012 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. PSY2012 meets the International/Intercultural competency requirement.

CCN: *PSY2012L  Title: GENERAL PSYCHOLOGY LAB
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *PSY2043  Title: ADVANCED GENERAL PSYCHOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *PSY2905  Title: INDEPENDENT STUDY IN PSYCHOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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 Sciences Department via an Instructor.

CCN: *PSY2930  Title: SPECIAL TOPICS:  PSYCHOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

Area: MTB  BUSINESS MATH
CCN: *QMB1001  Title: BUSINESS MATHEMATICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This course emphasizes the application of mathematics to selected business topics and problems. In addition, it includes material in linear equations and descriptive statistics.

CCN: *QMB2100  Title: QUANTITATIVE METHODS IN BUSINESS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

CCN: *QMB3302  Title: BUSINESS ANALYTICS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This is an introductory course in business analytics. It covers theories, techniques, and concepts related to the use of data in managerial decision making and its practical applications to business. This course covers topics that include data analysis, business intelligence, statistical modeling, data mining, social media analytics, and ethical concerns in data.

Area: RAT RADIATION THERAPY
CCN: RAT1001  Title: INTRODUCTION TO RADIATION THERAPY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Content is designed to provide the student with an overview of the foundations in radiation therapy and the practitioner's role in the health care delivery system. Principles, practices and policies of the educational program, health care organizations, principles of radiation, health safety, and professional responsibilities. In addition, ethics and law of the radiation therapist will be discussed and examined.

CCN: RAT1002  Title: INTRODUCTION TO RADIATION THERAPY CLINICAL
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: RAT1002L  Title: INTRODUCTION TO RADIATION THERAPY CLINICAL
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 24.00
Description: A course designed to provide knowledge and hands-on instruction in the application of radiation therapy procedures with a detailed study of instrumentation. This lab corresponds to the information and objectives of RAT 1002 Specific radiation therapy terminology, basic procedures, specific patient positioning and accessories will also be covered.

CCN: RAT1123  Title: RADIATION THERAPY PATIENT CARE
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: An introduction to the principles and practices of patient care during radiation therapy procedures and treatment. 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, universal precautions, isolation techniques, and introduction to medical ethics and law.

CCN: RAT1123L   Title: RADIATION THERAPY PATIENT CARE LAB
Credit Hrs:   1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course is a practical application of the theory taught in RAT1123, Radiation Patient Care. Topics include patient interaction skills, safety procedures, basic patient care needs, patient movement and handling, infection control, taking vital signs, administering oxygen, aseptic techniques, non-aseptic techniques, and medical emergencies.

CCN: RAT1210    Title: INTRODUCTION TO RADIATION THERAPY ANATOMY
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course is designed to present anatomy and its importance to the radiation therapist. A survey of the structure of human body as it pertains to radiation therapy will consider the following: the cell, tissues, glands, skeletal system, the spine, pelvis, lower limb, abdomen, thorax, upper limb, the neck, and the head.

CCN: RAT1212    Title: RADIATION THERAPY IMAGING ANATOMY
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: A study of radiographic human anatomy as it pertains to identifying organs at risk and treatment considerations for radiation therapy. Students will study the anatomy of the human skeleton and organ systems in both two dimensional and three-dimensional views.

CCN: RAT1614    Title: INTRO TO RADIATION THERAPY PHYSICS
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: An introductory study of radiation therapy physics to include mathematical principles & measurement, atomic structure, electromagnetic radiation, magnetism, electrostatics, electrodynamics, electromagnetism, x-ray production & interactions. Admission to program required.

CCN: RAT1615    Title: RADIATION THERAPY MEDICAL IMAGING
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: RAT1804    Title: CLINIC EDUCATION I
Credit Hrs:   1.00
Total Contact Hrs: 128.00 Lecture: 0.00 Lab: 0.00 Clinical: 128.00
Other: 0.00 Fees: 26.90
Description: Familiarization with the equipment utilized in the treatment of patients begins along with assisting the therapist in the clinical environment, simulation area, patient care nursing areas and the mold room. Demonstrations of patient leveling skills and beginning basic treatments and simulations competencies.

CCN: RAT2021    Title: PRINCIPLES OF RADIATION THERAPY I
Credit Hrs:   3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: An introduction to the principles of radiation therapy, radiation protection, and a review of radiation safety. This course will cover the historic and current aspects of cancer treatment. The roles and responsibilities of the radiation therapist and medical physicist will be discussed. This course will cover the simulation process and the use of a computed tomography simulator. Students will present a case study at the end of the semester on a patient they have followed in their clinical rotation.

CCN: RAT2022    Title: PRINCIPLES OF RADIATION THERAPY II
Credit Hrs:   3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course is continuation of RAT 2021, Principles of Radiation Therapy I. This course is designed to present an in-depth study of the principles of electron therapies, safety, quality assurance, and quality management in Radiation Oncology. In addition, basic dosimetry concepts will be reviewed to prepare the student for the RAT 2619 Dosimetry course in the last semester of the program. Students will present a case study at the end of the semester on a patient they have followed in their clinical rotation.

CCN: RAT2023    Title: RADIATION ONCOLOGY I
Credit Hrs:   4.00
Total Contact Hrs: 64.00 Lecture: 64.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: A study of the fundamentals of clinical radiation oncology. In this course students will be introduced to a cancer overview as it pertains to the biologic perspective, etiology, epidemiology, detection, diagnosis, screening, treatment options, prognosis, and pharmaceutical interventions for cancer. This course will introduce the student to clinical trials and their significance in the prevention and treatment of
cancer. Students will be introduced to skin, prostate, breast, central nervous system, lung, and gastrointestinal cancers (esophagus, gastric, pancreatic head, large colon, and anus).

CCN: RAT2024    Title: RADIATION ONCOLOGY II
Credit Hrs:   4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: A study of the fundamentals of clinical radiation oncology. This course is a continuation of RAT 2024, Oncology I. In this course students will be introduced to a cancer overview as it pertains to the biologic perspective, etiology, epidemiology, detection, diagnosis, screening, treatment options, prognosis, and pharmaceutical interventions for cancer. Students will be introduced to head and neck, gynecological, urinary bladder, testicular, penis, kidney, bone, cartilage, soft tissue, pediatric, Hodgkin lymphoma, non-Hodgkin lymphoma, leukemia, and endocrine cancers.

CCN: RAT2061    Title: RADIATION THERAPY SEMINAR
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: 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.

CCN: RAT2241    Title: RADIOBIOLOGY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course is designed to establish a basic knowledge of atomic structure and terminology and provide an overview of the principles of radiation protection and interaction with living systems. Also presented are the nature and characteristics of radiation (i.e., its effects on molecules, cells, tissues and the body as a whole, X-ray production and the fundamentals of photon interactions with matter). Radiation health and safety requirements and the responsibilities of the radiation therapist for patients, personnel and the public are also incorporated. Factors affecting biological response are presented, including acute and chronic effects of radiation, survival curves, total body exposure responses, and the goals of radiation therapy.

CCN: RAT2243    Title: RADIATION ONCOLOGY SECTIONAL ANATOMY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course is designed to present sectional anatomy and its importance to radiation therapist. This course will include three-dimensional (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. Normal anatomic structures of the head, neck, thorax, abdomen, pelvis, and spine will be presented in multi-planar sections. The pathophysiology of normal tissues as well as malignant tissues will be discussed and visualized in 3-D imaging.

CCN: RAT2617    Title: ADVANCED RADIATION PHYSICS I
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: The fundamentals of x-ray, gamma, and corpuscular radiation as applied to radiation therapy. Teletherapy units and nuclear reactors are also discussed.

CCN: RAT2618    Title: RADIATION PHYSICS II
Credit Hrs: 2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Advanced physics of ionizing radiation including measurements, dosages, absorption, isodose curves, filters, radioactive materials treatment planning, properties of radionuclides, radiation safety and health physics.

CCN: RAT2619    Title: DOSIMETRY & COMPUTER TREATMENT PLANNING
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course will introduce the students to the advanced physics and math calculations they will be required to perform as radiation therapists. The course will describe the physical and geometric factors affecting the applied beam energy and how to correct for these factors. The course will describe how to modify an applied beam to avoid critical structures while delivering the required dose of radiation.

CCN: RAT2814    Title: CLINIC EDUCATION II
Credit Hrs: 3.00
Total Contact Hrs: 384.00   Lecture: 0.00   Lab: 0.00   Clinical: 384.00
Other: 0.00   Fees: 26.90
Description: 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.
CCN: RAT2824    Title: CLINIC EDUCATION III
Credit Hrs:   3.00
Total Contact Hrs: 384.00  Lecture: 0.00   Lab: 0.00   Clinical: 384.00
Other: 0.00   Fees: 26.90
Description: 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.

CCN: RAT2834    Title: CLINIC EDUCATION IV
Credit Hrs:   1.00
Total Contact Hrs: 128.00  Lecture: 0.00   Lab: 0.00   Clinical: 128.00
Other: 0.00   Fees: 26.90
Description: 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.

Area: REA  READING
CCN: REA0007C   Title: COLLEGE PREPARATORY READING I
Credit Hrs:   4.00
Total Contact Hrs: 64.00  Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course teaches basic reading skills, vocabulary, word recognition skills, and work-study skills. Placement in REA0007C is determined by PERT test scores. An EAP0320C student must have an A, B, or C in EAP0320C and have taken the PERT reading subtest to place into REA0007C. Students are required to successfully complete an online competency based lab program which enhances reading comprehension and vocabulary.

CCN: REA0017C   Title: COLLEGE PREPARATORY READING II
Credit Hrs:   4.00
Total Contact Hrs: 64.00  Lecture: 48.00   Lab: 16.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: College Preparatory Reading II teaches basic reading and study skills to prepare students for college course work. An EAP0420C student must have an A, B, or C in EAP420C and have taken the reading portion of the PERT assessment to place into REA0017C. Students are required to successfully complete an online competency based lab program which enhances students' reading comprehension and vocabulary skills. Special fee charged. Prerequisite: Completion of REA0007C with a grade of C or
CCN: REA0055  Title: DEVELOPMENTAL READING MODULE (1 CREDIT)
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A course designed to satisfy the requirements of upper level developmental reading in modular format. 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.

CCN: REA0056  Title: DEVELOPMENTAL READING MODULE (2 CREDIT)
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A course designed to satisfy the requirements of upper level developmental reading in modular format. 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.

CCN: *REA1105  Title: COLLEGE READING STRATEGIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Teaches efficient reading abilities, comprehension, vocabulary, speed, study techniques, and reading skills necessary to conduct investigative research. REA1105 includes all CLAST skills.
Area: EDU  EDUCATION

CCN: *RED3012  Title: PRINCIPLES OF READING
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course provides an overview of six reading components. It provides students with effective methods of instruction and multisensory techniques. Students will learn how to analyze
assessments and resources that are available in Florida. This course is part of the Reading Endorsement that will allow educators to meet the need for highly-qualified teachers in reading per the Florida Department of Education.

CCN: *RED3342   Title: FOUND OF RESEARCH PRAC. IN READ ED & APP. OF INST.   Credit Hrs: 3.00   Total Contact Hrs: 58.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00   Other: 10.00   Fees: 4.75

Description: This course provides an understanding of the principles of scientifically based reading 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 preprofessional educators with the experience of observation and interaction with K-12 students.

CCN: *RED4519   Title: DIAGNOSTIC&INSTRUCTIONAL INTERVENTIONS IN READING   Credit Hrs: 3.00   Total Contact Hrs: 63.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00   Other: 15.00   Fees: 4.75

Description: 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 multi-sensory 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.

CCN: *RED4844   Title: READING PRACTICUM   Credit Hrs: 3.00   Total Contact Hrs: 78.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00   Other: 30.00   Fees: 4.75

Description: 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 K12 setting.

Area: REE  REAL ESTATE
CCN: *REE1040   Title: FLORIDA REAL ESTATE COMMISSION I
Credit Hrs:   4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *REE1500   Title: INTRODUCTION TO RESIDENTIAL PROPERTY MANAGEMENT
Credit Hrs:   2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *REE2200   Title: INTRODUCTION TO COMMERCIAL PROPERTY MANAGEMENT
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Introduces the concepts of commercial property management practices of various property types including office, retail, industrial, specialty and multi-family residential. Introduces appropriate management practices, including marketing and leasing space, maintaining properties, managing risks, and measuring financial performance.

Area: REL  RELIGION
CCN: *REL1210   Title: OLD TESTAMENT HISTORY
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *REL1240   Title: NEW TESTAMENT HISTORY
Credit Hrs:   3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *REL2000   Title: INTRODUCTION TO THE STUDY OF RELIGION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. REL2000 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. REL2000 meets the International/Intercultural competency requirement.

CCN: *REL2300   Title: WORLD RELIGIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course is a descriptive examination of the world's most popular religions. REL2300 is a writing credit course. Students must earn a grade of C to meet the requirements of the Gordon Rule for writing. REL2300 meets the International/Intercultural competency requirement.

CCN: *REL2930   Title: SPECIAL TOPICS: RELIGION
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: Course centers on topics 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 interested. Transfer credit is the prerogative of the receiving institution.

Area: RET  RESPIRATORY CARE
CCN: *RET1024   Title: INTRODUCTION TO RESPIRATORY CARE
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET1026    Title: RESPIRATORY THERAPY EQUIPMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET1026L   Title: RESPIRATORY THERAPY EQUIPMENT LAB
Credit Hrs:   1.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 45.00
Description: 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.

CCN: RET1264   Title: MECHANICAL VENTILATION
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET1264L   Title: MECHANICAL VENTILATION LAB
Credit Hrs:   1.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 29.00
Description: 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.

Area: CPT  CARDIOVASCULAR TECHNOLOGY
CCN: *RET1350   Title: CARDIOPULMONARY PHARMACOLOGY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: RET  RESPIRATORY CARE
CCN: RET1484   Title: CARDIO PULMONARY PATHOPHYSIOLOGY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET1485   Title: RESPIRATORY PHYSIOLOGY
Credit Hrs:   3.00
Description: 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.

CCN: RET1832L   Title: RESPIRATORY THERAPY CLINIC I
Credit Hrs:  3.00
Total Contact Hrs: 256.00   Lecture: 0.00    Lab: 0.00    Clinical: 256.00
Other: 0.00    Fees: 59.90
Description: 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.

CCN: RET1833L   Title: RESPIRATORY THERAPY CLINIC II
Credit Hrs:  2.00
Total Contact Hrs: 96.00   Lecture: 0.00    Lab: 0.00    Clinical: 96.00
Other: 0.00    Fees: 12.90
Description: 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. Special fee is charged.

CCN: RET2265   Title: ADVANCED RESPIRATORY EQUIPMENT
Credit Hrs:  2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 0.00
Description: This course introduces students to more advanced monitoring techniques in the areas of ventilation and oxygenation for the adult, pediatric and neonatal patient.

CCN: RET2265L   Title: ADVANCED RESPIRATORY EQUIPMENT LAB
Credit Hrs:  1.00
Total Contact Hrs: 32.00   Lecture: 0.00    Lab: 32.00    Clinical: 0.00
Other: 0.00    Fees: 50.00
Description: 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.

CCN: RET2271L   Title: CARDIOPULMONARY FUNCTION AND SIMULATION
Credit Hrs:  1.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00    Clinical: 0.00
Other: 0.00    Fees: 16.00
Description: 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.
CCN: RET2286C   Title: MANAGEMENT OF THE INTENSIVE CARE PATIENT
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 20.00 Lab: 12.00 Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET2414   Title: RESPIRATORY THERAPY PULMONARY FUNCTION
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00 Lab: 0.00 Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET2418   Title: CARDIOPULMONARY DIAGNOSTICS AND TECHNIQUES
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00 Lab: 0.00 Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET2601   Title: RESPIRATORY THERAPY MANAGEMENT
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00 Lab: 0.00 Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET2714   Title: PEDIATRIC AND NEONATAL RESPIRATORY CARE
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: RET2834L   Title: RESPIRATORY THERAPY CLINIC III
Credit Hrs:   3.00
Total Contact Hrs: 256.00   Lecture: 0.00 Lab: 0.00 Clinical: 256.00
Other: 0.00   Fees: 12.90
Description: 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.

CCN: RET2835L   Title: RESPIRATORY THERAPY CLINIC IV
Credit Hrs:   3.00
Total Contact Hrs: 256.00   Lecture: 0.00   Lab: 0.00   Clinical: 256.00
Other: 0.00   Fees: 54.90
Description: 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.

CCN: RET2934   Title: SELECTED TOPICS IN RESPIRATORY CARE
Credit Hrs:   1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: BEE BUSINESS ECONOMICS
CCN: *RMI2110   Title: PERSONAL INSURANCE PLANNING
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: BUS BUSINESS
CCN: *RMI2212   Title: PERSONAL BUSINESS AND PROPERTY INSURANCE
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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. Additional
topics include commercial and residential fire insurance, inland marine and transportation coverages, and multi-peril contracts. The specifics of how the State of Florida implements each type of insurance will be emphasized.

CCN: *RMI2662   Title: INTRODUCTION TO RISK MANAGEMENT AND INSURANCE
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

Area: RTE  RADIOGRAPHY
CCN: *RTE1000   Title: INTRODUCTION TO RADIOLOGIC TECHNOLOGY
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: This course is an introduction to the field of Imaging Sciences. Students will learn the basic principles of radiation protection, a history of radiography, ethical/legal issues, professional behavior, medical terminology, x-ray equipment operation, department organizational structure, safety, radiation protection, imaging media and receptors, image processing techniques, basic exposure factors, and accreditation and professional development.

CCN: RTE1111   Title: PATIENT CARE I
Credit Hrs:   3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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 & oxygen administration, medical emergencies and trauma & care of pediatric and geriatric patients, and patient care during urologic and gastrointestinal examinations.

CCN: RTE1111L   Title: PATIENT CARE I LAB
Credit Hrs:   1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 19.00
Description: 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, & taking vital signs.

CCN: RTE1418   Title: IMAGING I
Credit Hrs:   3.00
**Total Contact Hrs:** 48.00  **Lecture:** 48.00   **Lab:** 0.00   **Clinical:** 0.00  
**Other:** 0.00   **Fees:** 0.00  
**Description:** 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.  
**CCN:** RTE1418L   **Title:** IMAGING I LAB  
**Credit Hrs:** 1.00  
**Total Contact Hrs:** 32.00  **Lecture:** 0.00   **Lab:** 32.00   **Clinical:** 0.00  
**Other:** 0.00   **Fees:** 20.00  
**Description:** 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.  
**CCN:** RTE1503   **Title:** RADIOGRAPHIC PROCEDURES I  
**Credit Hrs:** 3.00  
**Total Contact Hrs:** 48.00  **Lecture:** 48.00   **Lab:** 0.00   **Clinical:** 0.00  
**Other:** 0.00   **Fees:** 0.00  
**Description:** 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.  
**CCN:** RTE1503L   **Title:** RADIOGRAPHIC PROCEDURES I LAB  
**Credit Hrs:** 1.00  
**Total Contact Hrs:** 32.00  **Lecture:** 0.00   **Lab:** 32.00   **Clinical:** 0.00  
**Other:** 0.00   **Fees:** 21.00  
**Description:** 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.  
**CCN:** RTE1513   **Title:** RADIOGRAPHIC PROCEDURES II  
**Credit Hrs:** 3.00  
**Total Contact Hrs:** 48.00  **Lecture:** 48.00   **Lab:** 0.00   **Clinical:** 0.00  
**Other:** 0.00   **Fees:** 0.00  
**Description:** 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.

CCN: RTE1513L   Title: RADIOGRAPHIC PROCEDURES II LAB
Credit Hrs:  1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other:  0.00   Fees: 21.00
Description: 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.

CCN: RTE1523    Title: RADIOGRAPHIC PROCEDURES III
Credit Hrs:  3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other:  0.00   Fees: 0.00
Description: A study of radiographic procedures of the spine, head, and trauma, mobile & surgical radiography. Topics include radiographic procedures of the cervical, thoracic, and lumbar spines, sacrum, coccyx, SI joints, skull, facial bones, nasal bones, paranasal sinuses, and common trauma, mobile and surgical examinations.

CCN: RTE1523L   Title: RADIOGRAPHIC PROCEDURES III LAB
Credit Hrs:  1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other:  0.00   Fees: 21.00
Description: 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.

CCN: RTE1804    Title: CLINICAL EDUCATION I
Credit Hrs:  2.00
Total Contact Hrs: 256.00   Lecture: 0.00   Lab: 0.00   Clinical: 256.00
Other:  0.00   Fees: 26.90
Description: 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.

CCN: RTE1814    Title: CLINICAL EDUCATION II
Credit Hrs:  2.00
Total Contact Hrs: 256.00   Lecture: 0.00   Lab: 0.00   Clinical: 256.00
Other:  0.00   Fees: 26.90
Description: 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.

CCN: RTE1824    Title: CLINICAL EDUCATION III
Credit Hrs: 2.00
Total Contact Hrs: 256.00  Lecture: 0.00  Lab: 0.00  Clinical: 256.00
Other: 0.00  Fees: 26.90
Description: 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.

CCN: RTE2061    Title: RADIOGRAPHY SEMINAR
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: RTE2112    Title: PATIENT CARE II
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: RTE2112L    Title: PATIENT CARE II LAB
Credit Hrs: 1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Practical application of theory taught in RTE2112. Topics include performing electrocardiography, gowning, gloving, setting up a sterile field, and venipuncture.

CCN: RTE2385    Title: RADIATION BIOLOGY AND PROTECTION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: RTE2457    Title: IMAGING II  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: RTE2457L    Title: IMAGING II LAB  
Credit Hrs: 1.00  
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 20.00  
Description: 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.

CCN: RTE2563    Title: ADVANCED IMAGE MODALITIES, PROCEDURES &  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: RTE2763    Title: COMPUTED TOMOGRAPHY & CROSS-SECTIONAL ANATOMY  
Credit Hrs: 3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: RTE2834    Title: CLINICAL EDUCATION IV  
Credit Hrs: 3.00
| Total Contact Hrs: | 384.00 | Lecture: | 0.00 | Lab: | 0.00 | Clinical: | 384.00 |
| Other: | 0.00 | Fees: | 26.90 |

**Description:** 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.

**CCN:** RTE2844  **Title:** CLINICAL EDUCATION V  **Credit Hrs:** 3.00

| Total Contact Hrs: | 384.00 | Lecture: | 0.00 | Lab: | 0.00 | Clinical: | 384.00 |
| Other: | 0.00 | Fees: | 26.90 |

**Description:** 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.

**CCN:** RTE2854  **Title:** CLINICAL EDUCATION VI  **Credit Hrs:** 1.00

| Total Contact Hrs: | 128.00 | Lecture: | 0.00 | Lab: | 0.00 | Clinical: | 128.00 |
| Other: | 0.00 | Fees: | 25.90 |

**Description:** 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.

**CCN:** RTE2905  **Title:** INDEPENDENT STUDY IN RADIOGRAPHY  **Credit Hrs:** 2.00

| Total Contact Hrs: | 128.00 | Lecture: | 0.00 | Lab: | 0.00 | Clinical: | 128.00 |
| Other: | 0.00 | Fees: | 0.00 |

**Description:** 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 receive additional instruction, practice, and be evaluated on radiographic procedures previously learned.

**Area:** SPC  **SPEECH**

**CCN:** *RTV2000  **Title:** INTRODUCTION TO RADIO AND TELEVISION  **Credit Hrs:** 3.00

| Total Contact Hrs: | 48.00 | Lecture: | 48.00 | Lab: | 0.00 | Clinical: | 0.00 |
| Other: | 0.00 | Fees: | 4.00 |

**Description:** 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.

Area: JOU  JOURNALISM  
CCN: *RTV2102  Title: BROADCAST WRITING  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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." Instructor's approval or

Area: SPC  SPEECH  
CCN: *RTV2241C  Title: TELEVISION PRODUCTION I  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 16.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 9.00  
Description: In this course the student will acquire understanding of the theory and practice of television program production and directing with emphasis on studio production. There is a requirement of two hours of television laboratory production per week. Completion of RTV2000 recommended prior to taking this course.

Area: COE  COOPERATIVE EDUCATION  
CCN: *RTV2949  Title: CO OP WORK EXP  
Credit Hrs:  3.00  
Total Contact Hrs: 144.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00  
Other: 144.00  Fees: 0.00  
Description: 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. All students must contact the Co- operative Education Office to obtain registration approval.

Area: COMM  COMMUNICATIONS  
CCN: *RUS1120  Title: BEGINNING RUSSIAN I  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Fundamentals of speaking, understanding, reading and writing in Russian.

Area: FRL  FOREIGN LANGUAGE, MODERN  
CCN: *RUS1121  Title: BEGINNING RUSSIAN II  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: Continuation of RUS1120. Further development of the basic skills. Selected readings.
Area: EDU   EDUCATION
CCN: *SCE3320   Title: INTEGRATIVE TEACHING METHODS IN MIDDLE GRADES
Credit Hrs:  3.00
Total Contact Hrs: 63.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 15.00   Fees: 4.75
Description: 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.

CCN: *SCE3420   Title: METHODS OF TEACHING PHYSICAL SCIENCES IN THE
Credit Hrs:  4.00
Total Contact Hrs: 64.00   Lecture: 64.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: *SCE3941   Title: TEACHING MIDDLE AND SECONDARY SCHOOL SCIENCES
Credit Hrs:  3.00
Total Contact Hrs: 108.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 60.00   Fees: 4.75
Description: 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.

CCN: *SCE4310   Title: SCIENCE IN THE ELEMENTARY SCHOOL
Credit Hrs: 1.00
Total Contact Hrs: 12.00 Lecture: 12.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course introduces conceptually and developmentally 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 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.

CCN: *SCE4330   Title: METHODS AND STRATEGIES OF TEACHING BIOLOGICAL
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 4.75
Description: 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.

CCN: *SCE4943   Title: STUDENT TEACHING IN MIDDLE GRADES SCIENCE
Credit Hrs: 12.00
Total Contact Hrs: 562.50 Lecture: 0.00 Lab: 0.00 Clinical: 0.00
Other: 562.50 Fees: 4.75
Description: 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.

CCN: *SCE4944   Title: STUDENT TEACHING IN BIOLOGICAL SCIENCES
Credit Hrs: 12.00
Total Contact Hrs: 450.00 Lecture: 0.00 Lab: 0.00 Clinical: 0.00
Other: 450.00 Fees: 4.75
Description: The Science Student Teaching course is designed
to provide interns with a field-based experience at the appropriate grade in Science Classroom/lab. Through the Science Student Teaching course the interns will implement and master the 12 Florida Educator Accomplished Practices. The course will focus on Science Education topics in relation to the Student Teaching experience and the teaching profession. Note: The Internship is composed of a minimum of 37.5 contact hours per week for 12 weeks.

CCN: *SCE4945   Title: STUDENT TEACHING IN SCIENCE
Credit Hrs: 12.00
Total Contact Hrs: 450.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 450.00  Fees: 4.75
Description: The Science Student Teaching course is designed to provide interns with a field-based experience at the appropriate grade in Science Classroom/lab. Through the Science Student Teaching course the interns will implement and master the 12 Florida Educator Accomplished Practices. The course will focus on Science Education topics in relation to the Student Teaching experience and the teaching profession. Note: The Internship is composed of a minimum of 37.5 contact hours per week for 12 weeks.

Area: GTL  GLOBAL TRADE & LOGISTICS
CCN: *SCM1001   Title: INTRODUCTION TO TRANSPORTATION & LOGISTICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SCM1020   Title: MANUFACTURING AND SERVICE OPERATIONS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.
CCN: *SCM1161  Title: SUPPLY CHAIN MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SCM2060  Title: CUSTOMER SERVICE/CUSTOMER RELATIONSHIP MANAGEMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SCM2150  Title: INTRODUCTION TO PROCUREMENT
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SCM2151  Title: DEMAND PLANNING
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: The effective anticipation, planning, and management of customer demand are key factors in the success of any organization. Companies strive to provide improved customer service levels at reduced costs, with planning and managing demand being two key components. This certification track is intended to train students in the basics of demand planning so they can quickly familiarize themselves with and become effective contributors to the demand planning processes that are part of SCM. Key elements of this course include aspects of demand planning, interaction between demand and order management, demand planning principles, demand planning tools and techniques, communication and management of demand, and contemporary approaches to demand planning.

CCN: *SCM2221   Title: WAREHOUSE OPERATIONS  
Credit Hrs: 3.00 
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00 
Other: 0.00  Fees: 0.00 
Description: 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.

CCN: *SCM2360   Title: SIX SIGMA YELLOW BELT BODY OF KNOWLEDGE  
Credit Hrs: 3.00 
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00 
Other: 0.00  Fees: 0.00 
Description: 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.

CCN: *SCM3110   Title: SUPPLY CHAIN MANAGEMENT_II  
Credit Hrs: 3.00 
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00 
Other: 0.00  Fees: 0.00 
Description: 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.

CCN: *SCM3141  Title: PROCUREMENT MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SCM3162  Title: SUPPLY CHAIN QUALITY MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SCM3315  Title: SIX SIGMA GREEN BELT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course is to prepare a candidate for the Six-Sigma Green Belt certification. The content is 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. The units include learning object objectives in the form of specific learning outcomes and the cognitive level at which test questions will be written. The specific learning outcomes are not intended to limit the subject matter or be all-inclusive of what might be covered in an exam.

CCN: *SCM3930  Title: SEMINAR/SPECIAL(topics
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SCM4105  Title: SUPPLY CHAIN MODELING
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 recommendation 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.

CCN: *SCM4120  Title: GLOBAL LOGISTICS/IMPORT & EXPORT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SCM4134  Title: INTERNATIONAL LAW & SUPPLY CHAIN MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Students will be exposed 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.
CCN: *SCM4191 Title: SUPPLY CHAIN MANAGEMENT CAPSTONE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course is intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and reporting.

CCN: *SCM4250 Title: HEALTH CARE & SUPPLY CHAIN MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *SCM4330 Title: APPLIED PRODUCTION/OPERATIONS MANAGEMENT
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *SCM4810 Title: SUPPLY CHAIN MANAGEMENT INTERNSHIP/PRACTICUM
Credit Hrs: 3.00
Total Contact Hrs: 144.00 Lecture: 0.00 Lab: 0.00 Clinical: 0.00
Other: 144.00 Fees: 0.00
Description: This course is a practical application in a clinical setting of knowledge acquired in the classroom.

Area: STD CAREER PLANNING WORKSHOP
CCN: *SLS1001 Title: STRATEGIES FOR SUCCESS
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course serves as an introduction to Broward College. It provides opportunities for students
to learn about Broward College and higher education, acquire and practice learning strategies, explore personal learning styles, identify career options, and develop skills for lifelong and responsible citizens.

CCN: *SLS1102   Title: STRATEGIES AND TOOLS FOR ACADEMIC SUCCESS
Credit Hrs: 2.00
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course serves as an introduction to Broward College and assists students in developing strategies and tools for academic success. Topics include college resources, time management, critical thinking, career planning, communication skills and global awareness. Students will clarify their goals and develop learning strategies and skills that will help them succeed in college and beyond.

CCN: *SLS1103   Title: FOUNDATION COURSE
Credit Hrs: 3.00
Total Contact Hrs: 58.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 10.00  Fees: 0.00
Description: 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.

CCN: *SLS1261   Title: LEADERSHIP
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SLS1272   Title: TEAM SELF-MANAGEMENT AND CAREER EXPLORATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SLS1501   Title: COLLEGE SUCCESS SKILLS
Credit Hrs: 1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: This course serves as an introduction to Broward
College. It assists students in coping with challenges of college life, clarifying their goals, learning strategies and skills that will help them succeed in college and life. Topics covered include: test-taking, note-taking, listening skills, memory techniques, academic regulations, ideas for wellness, understanding of diversity and career issues that face college students.

CCN: *SLS2271   Title: TEAM SELF MANAGEMENT WITH SOCIAL JUSTICE TOPICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: LLL  LIFELONG LEARNING

CCN: *SLS2715   Title: STUDENT LEADERSHIP DEVELOPMENT
Credit Hrs: 1.00
Total Contact Hrs: 16.00   Lecture: 16.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.
Area: SON  DIAGNOSTIC MED SONOGRAPHY

CCN: SON1003L   Title: FUNDAMENTALS OF SONOGRAPHY LAB I
Credit Hrs: 1.00
Total Contact Hrs: 48.00   Lecture: 0.00   Lab: 48.00   Clinical: 0.00
Other: 0.00   Fees: 28.00
Description: 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.

CCN: SON1100L   Title: PRINCIPLES AND PROTOCOLS OF SONOGRAPHIC IMAGING
Credit Hrs: 2.00
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00
Other: 0.00   Fees: 28.00
Description: An introduction to the basic approaches to sonographic scanning and scanning protocols for the abdomen and pelvis

CCN: SON1111   Title: ABDOMINAL SONOGRAPHY I
Credit Hrs: 2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: An introduction to the cross-sectional anatomy of the abdominal area and its recognition on
sonographic visualization systems.

CCN: SON1112  Title: ABDOMINAL SONOGRAPHY II  
Credit Hrs:  2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: An in-depth presentation of sonographs of the abdominal area stressing deviations from the norm and the studies to make a diagnostically acceptable study.

CCN: SON1121  Title: SONOGRAPHIC OB/GYN I  
Credit Hrs:  2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: SON1122  Title: SONOGRAPHIC OB/GYN II  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: The detection of anomalies, pathology, deviation from normal and the planes which must be sonographically imaged for accurate diagnosis is stressed.

CCN: SON1141  Title: SMALL PARTS SONOGRAPHY  
Credit Hrs:  2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: A general introduction to the areas of carotid, eye, thyroid, prostate, scrotum, breast and other superficial structures.

CCN: SON1170  Title: SONOGRAPHY OF THE CIRCULATORY SYSTEM  
Credit Hrs:  2.00  
Total Contact Hrs: 32.00  Lecture: 32.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: An introduction to the hemodynamics of the circulatory systems and the sonographic imaging and Doppler assessment of the cardiac and vascular structures. Prerequisite: Program Admission.

CCN: SON1211  Title: MEDICAL SONOGRAPHIC PHYSICS I  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: SON1212  Title: MEDICAL SONOGRAPHIC PHYSICS II  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: SON1214   Title: PRACTICAL ASPECTS OF SONOGRAPHY I
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: SON1215   Title: PRACTICAL ASPECTS OF SONOGRAPHY II
Credit Hrs:   2.00
Total Contact Hrs: 32.00   Lecture: 32.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00
Description: 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.

CCN: SON1804   Title: CLINIC A
Credit Hrs:   3.00
Total Contact Hrs: 384.00   Lecture: 0.00   Lab: 0.00   Clinical: 384.00
Other: 0.00   Fees: 12.90
Description: 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.

CCN: SON1814   Title: CLINIC B
Credit Hrs:   3.00
Total Contact Hrs: 384.00   Lecture: 0.00   Lab: 0.00   Clinical: 384.00
Other: 0.00   Fees: 12.90
Description: 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.

CCN: SON1824   Title: CLINIC C
Credit Hrs:   3.00
Total Contact Hrs: 384.00   Lecture: 0.00   Lab: 0.00   Clinical: 384.00
Other: 0.00   Fees: 12.90
Description: 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.

CCN: SON2013L   Title: FUNDAMENTALS OF SONOGRAPHY LAB II 
Credit Hrs:   1.00 
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00 
Other:  0.00  Fees: 28.00 
Description: 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.

CCN: SON2061   Title: SEMINAR IN SONOGRAPHY 
Credit Hrs:   1.00 
Total Contact Hrs: 16.00  Lecture: 0.00  Lab: 16.00  Clinical: 0.00 
Other:  0.00  Fees: 0.00 
Description: 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.

CCN: SON2171   Title: VASCULAR SONOGRAPHY 
Credit Hrs:   3.00 
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00 
Other:  0.00  Fees: 0.00 
Description: 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.

Area: CEN CONTINUING EDUCATION - HEALTH 
CCN: SON2175   Title: VASCULAR SONOGRAPHY II 
Credit Hrs:   3.00 
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00 
Other:  0.00  Fees: 0.00 
Description: Arterial anatomy below the neck and head, and it's 
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.

CCN: SON2176   Title: VASCULAR SONOGRAPHY III 
Credit Hrs:   3.00 
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00 
Other:  0.00  Fees: 0.00 
Description: 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.

Area: SON DIAGNOSTIC MED SONOGRAPHY
CCN: SON2400  Title: INTRODUCTION TO ECHOCARDIOGRAPHY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Anatomy of the heart and the procedures used in screening are introduced stressing recognition of the normal versus abnormal.

CCN: SON2400L  Title: INTRODUCTION TO ECHOCARDIOGRAPHY LAB
Credit Hrs: 1.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 28.00
Description: Laboratory sessions for Introduction to Echocardiography Lab (SON 2401L) 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.

CCN: SON2401  Title: ECHOCARDIOGRAPHY II
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: SON2401L  Title: ECHOCARDIOGRAPHY II LAB
Credit Hrs: 1.00
Total Contact Hrs: 48.00  Lecture: 0.00  Lab: 48.00  Clinical: 0.00
Other: 0.00  Fees: 28.00
Description: Laboratory sessions for Echocardiography II Lab (SON 2401L) 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.

CCN: SON2834  Title: CLINIC D
Credit Hrs: 3.00
Total Contact Hrs: 384.00 Lecture: 0.00 Lab: 0.00 Clinical: 384.00
Other: 0.00 Fees: 12.90
Description: 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.

CCN: SON2844 Title: CLINIC E
Credit Hrs: 3.00
Total Contact Hrs: 384.00 Lecture: 0.00 Lab: 0.00 Clinical: 384.00
Other: 0.00 Fees: 12.90
Description: 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.

Area: PSY PSYCHOLOGY
CCN: *SOP2002 Title: SOCIAL PSYCHOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: This course features the scientific study of social factors that influence individual behavior and cognition. Course topics include concepts of social thinking, attitudes, decision making, strategies of social influence, such as conformity, obedience, persuasion, social facilitation, and applications of social psychology in various academic disciplines and career fields. Combining a knowledge of Psychology, Sociology, and other behavioral sciences, this course is an interdisciplinary approach to the study of human interaction. SOP2002 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. SOP2002 meets the International/Intercultural competency requirement.

Area: SOW SOCIAL WORK
CCN: *SOW2020 Title: INTRODUCTION TO SOCIAL WELFARE
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *SOW2054  Title: SOCIAL SERVICE FIELD EXPERIENCE I
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.

Area: SPC  SPEECH
CCN: *SPC1017  Title: INTRODUCTION TO SPEECH COMMUNICATION
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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. SPC1017 meets the International/Intercultural competency requirement.

CCN: *SPC1065  Title: SPEAKING FOR PROFESSIONALS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: This is a practical and applied course designed to meet the needs of the professional community. Students will apply the various components of human communication and communication processes in a professional setting. Topics will include: public speaking, interviewing, job seeking, leadership skills, conflict management, listening, nonverbal communication, and small group communication. Students will compose and analyze spoken and written messages that adapt to different audiences and construct effective spoken and written presentations for face-to-face and computer-mediated environments.

CCN: *SPC1511  Title: ARGUMENTATION AND DEBATE
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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.
CCN: *SPC1608  Title: INTRODUCTION TO PUBLIC SPEAKING  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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. SPC1608 meets the International/Intercultural competency requirement.

CCN: *SPC2300  Title: INTRODUCTION TO INTERPERSONAL COMMUNICATION  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

Area: SPN SPANISH

CCN: *SPN1000  Title: ELEMENTARY SPANISH CONVERSATION  
Credit Hrs:  3.00  
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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.

CCN: *SPN1120  Title: BEGINNING SPANISH I  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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. SPN1120 meets the foreign language and the International/Intercultural competency requirements.

CCN: *SPN1121  Title: BEGINNING SPANISH II  
Credit Hrs:  4.00  
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00
Description: Continuation of SPN 1120. Further development of language components to include speaking, listening-comprehension, reading, writing, and appreciation of diverse cultures. Classroom practice and exercises supplemented by laboratory and/or multi-media activities designed to develop and enhance communicative competence and cultural sensitivity. Students completing SPN 1121 will have the necessary foundation to advance to SPN 2220. Students are encouraged to study abroad. SPN 1121 meets the foreign language and the International/Intercultural competency requirements.

CCN: *SPN1170   Title: SPANISH STUDY TRAVEL
Credit Hrs: 3.00
Total Contact Hrs: 90.00  Lecture: 0.00  Lab: 0.00  Clinical: 0.00
Other: 90.00  Fees: 0.00
Description: A course designed for students who wish to combine the study of Spanish with subsequent travel to a Spanish speaking region.

CCN: *SPN2201   Title: INTERMEDIATE SPANISH II
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. SPN2201 meets the foreign language and International/Intercultural competency requirement.

CCN: *SPN2220   Title: INTERMEDIATE SPANISH I
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. SPN2220 meets the foreign language and the International/Intercultural competency requirements.

CCN: *SPN2240   Title: INTERMEDIATE SPANISH CONVERSATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 SPN 2201 course would allow. Special Fee Charged.

CCN: *SPN2340  Title: BEGINNING SPANISH FOR SPANISH SPEAKERS I
Credit Hrs: 4.00
Total Contact Hrs: 64.00  Lecture: 64.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. A student needs to be a heritage or native speaker of Spanish who understands Spanish but has little or not formal training in the language. Please contact MFL Dept for further advice or placement if needed. SPN2340 meets the foreign language and the International/Intercultural competency requirement.

CCN: *SPN2955  Title: STUDY ABROAD: ADVANCED COMPOSITION AND CONVERS. I
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 BCC Study Abroad Programs.

Area: STA  STATISTICS
CCN: *STA1001  Title: PATHWAY TO STATISTICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: STA1001 lays 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. Please check your degree requirements before enrolling in this course.
Students who complete this course will be prepared to enter STA 2023, MGF1106, and MGF1107. This
course will not serve as a prerequisite for MAT1033 or MAC1105.

CCN: *STA2023  Title: STATISTICS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: PLS  LANDSCAPE TECHNOLOGY
CCN: *SWS2242C  Title: WETLANDS MANAGEMENT I
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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 field work. Completion of any of the horticultural biology, zoology, or native plant courses would be helpful and is suggested.

Area: AGR  AGRICULTURE
CCN: *SWS3006  Title: INTRO TO SOIL SCIENCE
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

Area: BEH  BEHAVIORAL SCIENCE
CCN: *SYG2000  Title: PRINCIPLES OF SOCIOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. SYG2000 is a writing credit course. Students must earn a
minimum grade of C to meet the requirements of the Gordon Rule for writing. SYG2000 meets the International/Intercultural competency requirement.

CCN: *SYG2010  Title: SOCIAL PROBLEMS
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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, gender identity, sexual orientation, sexual behavior, and global social problems. SYG2010 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. SYG2010 meets the International/Intercultural competency requirement.

CCN: *SYG2230  Title: CONTEMPORARY RACE AND ETHNIC STUDIES
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: A study of minority dominant relations with emphasis on ethnic, racial, and religious minorities. This is an International/Intercultural competency course.

Area: SOC  SOCIOLOGY
CCN: *SYG2322  Title: JUVENILE DELINQUENCY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SYG2323  Title: INTRODUCTION TO CRIMINOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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.

Area: BEH  BEHAVIORAL SCIENCE
CCN: *SYG2340  Title: SOCIOLOGY OF HUMAN SEXUALITY
Credit Hrs: 3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  Other: 0.00  Fees: 0.00
Description: 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. SYG2340 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. SYG2340 meets the International/Intercultural competency requirement.

Area: SOC  SOCIOLOGY
CCN: *SYG2421  Title: MARRIAGE AND FAMILIES: INTERCULTURAL COMPARISON
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SYG2441  Title: SOCIAL INSTITUTIONS
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *SYG2905  Title: INDEPENDENT STUDY IN SOCIOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: A directed study course in Sociology. 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 Associate Dean of the Social Behavioral Sciences Department via an instructor with whom he wants to work. Prerequisite to be ascertained by the instructor and the Associate Dean.

CCN: *SYG2940  Title: SOCIOLOGY FIELD SCHOOL
Credit Hrs:  1.00
Total Contact Hrs: 16.00  Lecture: 16.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Instructor's approval.

CCN: *SYG2942  Title: SOCIOLOGY FIELD SCHOOL
Credit Hrs:  3.00
Total Contact Hrs: 48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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. Prerequisite: Instructor approval.

Area: ACC ACCOUNTING
CCN: *TAX2000 Title: INCOME TAX I
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *TAX2010 Title: INCOME TAX II
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

Area: THE THEATRE
CCN: *THE2000 Title: THEATRE APPRECIATION
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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 video taped and live stage plays will furnish examples of the various dramatic genres, including tragedy, comedy and musical theatre. THE2000 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. THE2000 meets the International/Intercultural competency requirement.

CCN: *THE2051L Title: CHILDREN'S THEATRE PRODUCTION
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 0.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Participation in the rehearsal and production of the Children's Theatre Program, which continues during the entire term.

CCN: *THE2052L Title: CHILDREN'S THEATRE TECHNICAL
Credit Hrs: 3.00
Total Contact Hrs: 96.00 Lecture: 0.00 Lab: 96.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: Participation in the technical aspects of the Children's Technical Theatre Program.

CCN: *THE2300 Title: SCRIPT ANALYSIS
Credit Hrs: 3.00
Total Contact Hrs: 48.00   Lecture: 48.00   Lab: 0.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: This course is structure toward reading and analyzing dramatic works from various periods, countries, and genres. Students identify elements such as plot, theme, character, dialogue and style and compare and contrast these elements with the socio-political climate of the era. Philosophical ideals, morals, ethics, beliefs and perceptions of the culture are identified and evaluated within the dramatic text as students assess the ways in which art reflects life and illuminates important themes. THE2300 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing. THE2300 meets the International Intercultural competency requirement.

CCN: *TPA1290C  Title: TECHNICAL THEATRE LAB I
Credit Hrs: 1.00
Total Contact Hrs: 80.00   Lecture: 48.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 42.00

Description: Participation as technician in the dramatic and musical productions of the college. May be repeated four times for credit. Instructor's permission required for enrollment.

CCN: *TPA1291L  Title: TECHNICAL THEATRE LAB II
Credit Hrs: 2.00
Total Contact Hrs: 64.00   Lecture: 0.00   Lab: 64.00   Clinical: 0.00
Other: 0.00   Fees: 42.00

Description: Participation as technician in the Dramatic and Musical productions of the college. May be repeated two times for credit. Instructor's permission required for enrollment.

CCN: *TPA1292L  Title: TECHNICAL THEATRE LAB III
Credit Hrs: 3.00
Total Contact Hrs: 96.00   Lecture: 0.00   Lab: 96.00   Clinical: 0.00
Other: 0.00   Fees: 42.00

Description: Participation as technician in the Dramatic and Musical productions of the college. May be repeated two times for credit. Instructor's permission required for enrollment.

CCN: *TPA1293L  Title: ADVANCED TECH LAB I
Credit Hrs: 1.00
Total Contact Hrs: 32.00   Lecture: 0.00   Lab: 32.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: Participation as technician in the dramatic and musical productions of the college. May be repeated two times for credit. Instructor's permission required for enrollment.

CCN: *TPA1294L  Title: ADVANCED TECH LAB II
Credit Hrs: 2.00
Total Contact Hrs: 64.00   Lecture: 0.00   Lab: 64.00   Clinical: 0.00
Other: 0.00   Fees: 0.00

Description: Participation as technician in the dramatic and musical productions of the college. May be repeated two times for credit. Instructor's permission required for enrollment.
CCN: *TPA1296L  Title: ADVANCED TECH LAB III  
Credit Hrs:  3.00  
Total Contact Hrs:  96.00  
Lecture:  0.00  
Lab:  96.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: Participation as technician in the dramatic and musical productions of the college. May be repeated two times for credit. Instructor's permission required for enrollment.

CCN: *TPA2000C  Title: INTRODUCTION TO THEATRE DESIGN  
Credit Hrs:  3.00  
Total Contact Hrs:  64.00  
Lecture:  32.00  
Lab:  32.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: 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.

CCN: *TPA2192L  Title: SUMMER THEATRE/TECHNICAL PRODUCTION  
Credit Hrs:  3.00  
Total Contact Hrs:  96.00  
Lecture:  0.00  
Lab:  96.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: 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.

CCN: *TPA2200C  Title: STAGECRAFT  
Credit Hrs:  3.00  
Total Contact Hrs:  64.00  
Lecture:  32.00  
Lab:  32.00  
Clinical:  0.00  
Other:  0.00  
Fees:  35.00  
Description: An investigation of the principles of stagecraft, lighting, props and set construction.

CCN: *TPA2220  Title: INTRODUCTION TO STAGE LIGHTING  
Credit Hrs:  3.00  
Total Contact Hrs:  64.00  
Lecture:  32.00  
Lab:  32.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: 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.

CCN: *TPA2248C  Title: MAKEUP FOR STAGE AND TELEVISION  
Credit Hrs:  3.00  
Total Contact Hrs:  64.00  
Lecture:  32.00  
Lab:  32.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: The theoretical study and practical application of corrective, straight, character, 3-dimensional, and prosthetic make-up for the stage.

CCN: *TPA2900  Title: DIRECTED INDEPENDENT STUDENT (CAPSTONE)  
Credit Hrs:  3.00  
Total Contact Hrs:  64.00  
Lecture:  64.00  
Lab:  0.00  
Clinical:  0.00  
Other:  0.00  
Fees:  0.00  
Description: 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.

CCN: *TPP1190L Title: PERFORMANCE LAB I
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 0.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 42.00
Description: 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.

CCN: *TPP1191L Title: PERFORMANCE LAB II
Credit Hrs: 2.00
Total Contact Hrs: 64.00 Lecture: 0.00 Lab: 64.00 Clinical: 0.00
Other: 0.00 Fees: 42.00
Description: 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.

CCN: *TPP1192L Title: PERFORMANCE LAB III
Credit Hrs: 3.00
Total Contact Hrs: 192.00 Lecture: 0.00 Lab: 192.00 Clinical: 0.00
Other: 0.00 Fees: 42.00
Description: 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.
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.

CCN: *TPP1193L  Title: ADVANCED PERFORMANCE LAB I
Credit Hrs:  1.00
Total Contact Hrs: 32.00  Lecture: 0.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Advanced level of Performance Lab I for students
with performance experience. 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 are regarding the physical and
vocal qualities of each character being
portrayed.

CCN: *TPP1195L  Title: ADVANCED PERFORMANCE LAB II
Credit Hrs:  2.00
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Advanced level of Performance Lab II for students
with performance experience. 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 are regarding the physical and
vocal qualities of each character being
portrayed.

CCN: *TPP1197L  Title: ADVANCED PERFORMANCE LAB III
Credit Hrs:  3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Advanced level of Performance Lab III for students
with performance experience. 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.

CCN: *TPP2110C  Title: ACTING I
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 35.00
Description: 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.
Area: CE15 ART & CULTURE

CCN: *TPP2111C  Title: ACTING II
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 35.00
Description: 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 inner and outer life of a given character.
Area: THE  THEATRE

CCN: *TPP2190L  Title: REHEARSAL AND PERFORMANCE I
Credit Hrs: 3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 42.00
Description: Participation in the audition, rehearsal and performance process of a theatrical stage production.

CCN: *TPP2191L  Title: REHEARSAL AND PERFORMANCE II
Credit Hrs: 3.00
Total Contact Hrs: 96.00  Lecture: 0.00  Lab: 96.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: Advanced level of Rehearsal and Performance II. Consists of participation in the audition, rehearsal and performance process of a theatrical stage production.

CCN: *TPP2260C  Title: PERFORMANCE IN FILM
Credit Hrs: 3.00
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00
Other: 0.00  Fees: 0.00
Description: 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.

CCN: *TPP2500C  Title: MOVEMENT FOR THE ACTOR  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 35.00  
Description: 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.

CCN: *TPP2700C  Title: INTRO TO VOICE  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 35.00  
Description: 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.

CCN: *TPP2701C  Title: VOICE AND ARTICULATION II  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 32.00  Lab: 32.00  Clinical: 0.00  
Other: 0.00  Fees: 35.00  
Description: 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.

CCN: *TPP2900L  Title: DIRECTED INDEPENDENT STUDY (CAPSTONE)  
Credit Hrs: 3.00  
Total Contact Hrs: 64.00  Lecture: 0.00  Lab: 64.00  Clinical: 0.00  
Other: 0.00  Fees: 0.00  
Description: 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. Hours and level may vary.

Area: EDU  EDUCATION  
CCN: *TSL3080  Title: ESOL ISSUES AND STRATEGIES I  
Credit Hrs: 3.00  
Total Contact Hrs: 58.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00  
Other: 10.00  Fees: 4.75
Description: 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.

CCN: *TSL4081  Title: ESOL ISSUES AND STRATEGIES II
Credit Hrs:  3.00
Total Contact Hrs:  58.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  10.00  Fees:  4.75
Description: This course is designed to build on the foundation course in TESOL for pre-service students in the teacher education program. The goal of this course is to link the theory and practice for effective teaching of (ESOL) English Speakers of Other Languages students by researching cross-cultural awareness and understanding, and integrating language as a system. The course will focus primarily on methods, curriculum and assessment of ESOL students in the area of language development, and content area instruction. Effective strategies enhancing reading and writing instruction for ELL students will be emphasized. Students are to complete a minimum of 10 hours of field experience in a K-12 setting.

Area: HIS  GENERAL HISTORY
CCN: *WOH2040  Title: WORLD IN THE 20TH CENTURY
Credit Hrs:  3.00
Total Contact Hrs:  48.00  Lecture: 48.00  Lab: 0.00  Clinical: 0.00
Other:  0.00  Fees:  0.00
Description: 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. WOH2040 is a writing credit course. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule for writing.
WOH2040 meets the International/Intercultural competency requirement.

Area: BOT BIOLOGICAL SCIENCE
CCN: *ZOO2010 Title: GENERAL ZOOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *ZOO2010L Title: GENERAL ZOOLOGY LABORATORY
Credit Hrs: 1.00
Total Contact Hrs: 32.00 Lecture: 0.00 Lab: 32.00 Clinical: 0.00
Other: 0.00 Fees: 22.00
Description: 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.

Area: AGR AGRICULTURE
CCN: *ZOO4234 Title: GENERAL PARASITOLOGY
Credit Hrs: 3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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. Corequisite: ZOO4234L. Prerequisites: BSC2010, BSC2011 (or ZOO2010), or permission of instructor.

Area: BIO BIOLOGY
CCN: *ZOO4234L Title: GENERAL PARASITOLOGY LAB
Credit Hrs: 1.00
Total Contact Hrs: 48.00 Lecture: 0.00 Lab: 48.00 Clinical: 0.00
Other: 0.00 Fees: 113.00
Description: General Parasitology Lab 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. Corequisite: ZOO 4234. Prerequisites: BSC 2010, BSC 2011 (or ZOO 2010), or permission of
instructor. Credit Hours: 1
Area: EDU EDUCATION
CCN: *ZOO4713 Title: COMPARATIVE VERTEBRATE ANATOMY & PHYSIOLOGY
Credit Hrs:  3.00
Total Contact Hrs: 48.00 Lecture: 48.00 Lab: 0.00 Clinical: 0.00
Other: 0.00 Fees: 0.00
Description: 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.

CCN: *ZOO4713L Title: COMPARATIVE VERTEBRATE MORPHOLOGY AND PHYSIOLOGY
Credit Hrs: 1.00
Total Contact Hrs: 48.00 Lecture: 0.00 Lab: 48.00 Clinical: 0.00
Other: 0.00 Fees: 4.00
Description: 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.