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FLORIDA STATEWIDE COURSE NUMBERING SYSTEM

Courses in this catalog are identified by prefixes and numbers that were assigned by Florida’s Statewide Course Numbering System (SCNS). This numbering system is used by all public postsecondary institutions in Florida and 28 participating non-public institutions. The major purpose of this system is to facilitate the transfer of courses between participating institutions. Students and administrators can use the online Statewide Course Numbering System to obtain course descriptions and specific information about course transfer between participating Florida institutions. This information is at the SCNS website at http://scns.fldoe.org.

Each participating institution controls the title, credit, and content of its own courses and recommends the first digit of the course number to indicate the level at which students normally take the course. Course prefixes and the last three digits of the course numbers are assigned by members of faculty discipline committees appointed for that purpose by the Florida Department of Education in Tallahassee. Individuals nominated to serve on these committees are selected to maintain a representative balance as to type of institution and discipline field or specialization.

The course prefix and each digit in the course number have a meaning in the Statewide Course Numbering System (SCNS). The list of course prefixes and numbers, along with their generic titles, is referred to as the “SCNS taxonomy.” Descriptions of the content of courses are referred to as “statewide course profiles.”

Example of Course Identifier

<table>
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<th>Prefix</th>
<th>Level Code</th>
<th>Century Digit</th>
<th>Decade Digit</th>
<th>Unit Digit</th>
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<td></td>
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<td>Composition</td>
<td>Composition</td>
<td>Skills</td>
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General Rule for Course Equivalencies

Equivalent courses at different institutions are identified by the same prefixes and same last three digits of the course number and are guaranteed to be transferable between participating institutions that offer the course, with a few exceptions as listed below in Exception to the General Rule for Equivalency.

For example, a freshman composition skills course is offered by 56 different postsecondary institutions. Each institution uses “ENC_101” to identify its freshman composition skills course. The level code is the first digit and represents the year in which students normally take the course at a specific institution. In the SCNS taxonomy, “ENC” means “English Composition,” the century digit “1” represents “Freshman Composition,” the decade digit “0” represents “Freshman Composition Skills,” and the unit digit “1” represents “Freshman Composition Skills I.”

In the sciences and certain other areas, a “C” or “L” after the course number is known as a lab indicator. The “C” represents a combined lecture and laboratory course that meets in the same place at the same time. The “L” represents a laboratory course or the laboratory part of a course, having the same prefix and course number without a lab indicator, which meets at a different time or place.

Transfer of any successfully completed course from one participating institution to another is guaranteed in cases where the course to be transferred is equivalent to one offered by the receiving institution. Equivalencies are established by the same prefix and last three digits and comparable faculty credentials at both institutions. For example, ENC 1101 is offered at a community college. The same course is offered at a state university as ENC 2101. A student who has successfully completed ENC 1101 at the community college is guaranteed to receive transfer credit for ENC 2101 at the state university if the student transfers. The student cannot be required to take ENC 2101 again since ENC 1101 is equivalent to ENC 2101. Transfer
credit must be awarded for successfully completed equivalent courses and used by the receiving institution to determine satisfaction of requirements by transfer students on the same basis as credit awarded to the native students. It is the prerogative of the receiving institution, however, to offer transfer credit for courses successfully completed that have not been designated as equivalent. **NOTE:** Credit generated at institutions on the quarter-term system may not transfer the equivalent number of credits to institutions on semester-term systems. For example, 4.0 quarter hours often transfers as 2.67 semester hours.

### The Course Prefix

The course prefix is a three-letter designator for a major division of an academic discipline, subject matter area, or sub-category of knowledge. The prefix is not intended to identify the department in which a course is offered. Rather, the content of a course determines the assigned prefix to identify the course.

### Authority for Acceptance of Equivalent Courses

Section 1007.24(7), Florida Statutes, states:

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

### Exceptions to the General Rule for Equivalency

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

A. Courses not offered by the receiving institution.
B. For courses at non-regionally accredited institutions, courses offered prior to the established transfer date of the course in question.
C. Courses in the _900-999_ series are not automatically transferable, and must be evaluated individually. These include such courses as Special Topics, Internships, Apprenticeships, Practica, Study Abroad, Thesis and Dissertations.
D. College preparatory and vocational preparatory courses.
E. Graduate courses.
F. Internships, apprenticeships, practica, clinical experiences and study abroad courses with numbers other than those ranging from 900-999.
G. Applied courses in the performing arts (Art, Dance, Interior Design, Music, and Theatre) and skills courses in Criminal Justice (academy certificate courses) are not guaranteed as transferable. These courses need evidence of achievement (i.e., portfolio, audition, interview, etc.).

### Courses at Non-regionally Accredited Institutions

The Statewide Course Numbering System makes available on its home page (http://scns.fldoe.org) a report entitled “Courses at Nonregionally Accredited Institutions” that contains a comprehensive listing of all nonpublic institution courses in the SCNS inventory, as well as each course’s transfer level and transfer effective date. This report is updated monthly. Questions about the Statewide Course Numbering System and appeals regarding course credit transfer decisions should be directed to The District Director for Academic Affairs, at (954) 201-7519 or the Florida Department of Education, Office of Articulation, 1401 Turlington Building, Tallahassee, Florida 32399-0400. Special reports and technical information may be available on its home page (http://scns.fldoe.org) for Academic Affairs, at (954) 201-7519 or the Florida Department of Education, Office of Articulation, 1401 Turlington Building, Tallahassee, Florida 32399-0400. Special reports and technical information may be available on its home page (http://scns.fldoe.org)
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requested by calling the Statewide Course Numbering System office at (850) 245-0427 or via the internet at http://scns.fldoe.org
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ACG1003 ACCOUNTING SURVEY (3)
Instruction in standard bookkeeping procedures for small professional, service, and retail sole proprietorships. Attention is given to journalizing, posting, preparing the trial balance and financial statements. Procedures for handling petty cash, bank deposits and withdrawals, payroll business tax reports, and special journals are included. This course is primarily for the non-accounting major or for those who need additional background prior to taking ACG2001, Principles of Accounting I. Supplementary review and practice in applying accounting principles is available through usage of computer assisted instructional software. Prerequisite: MTB1103, suggested.
*This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ACG2001 PRINCIPLES OF ACCOUNTING I (3)
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" may experience academic difficulty in ACG2011, Principles of Accounting II. A grade of less than "C" is not transferable to upper division.
*This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ACG2011 PRINCIPLES OF ACCOUNTING II (3)
As the second course of the 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" may experience academic difficulty in ACG2071, Managerial Accounting. A grade of less than "C" is not transferable to upper division. Prerequisite: ACG2001
*This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ACG2071 MANAGERIAL ACCOUNTING (3)
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. Prerequisite: ACG2011
*This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ACG2100 INTERMEDIATE ACCOUNTING I (3)
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 plant assets. Advisement Note: Students achieving less than a grade of "C" in ACG2011, Principles of Accounting II, may experience academic difficulty in this course. Prerequisite: ACG2011
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ACG2110 INTERMEDIATE ACCOUNTING II (3)
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. Prerequisite: ACG2100
*This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ACG2450C COMPUTERIZED ACCOUNTING APPLICATION (3)
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. Prerequisite: ACG1003
*This course can be used for the AA degree.*
Lec Hrs=12 Lab Hrs=36 Oth Hrs=0 Fees=24.00

ACG2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of learning objectives and employer evaluations. 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.
This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AER1081C INTRODUCTION TO AUTOMOTIVE TECH. (4)
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.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=90.18

AER1082C INTRODUCTION TO GM AUTOMOTIVE TECHN (4)
This course is designed to introduce the student to the various gm systems of the automobile. It will include instruction in shop practices, safety, service manuals, pay structures, tools, warranties, and personal relationships necessary to succeed in the gm dealership. The student will learn minor repair procedures including lubrication, wheel and tire, exhaust system service and new car pre-delivery service.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=90.18

AER1197C GM AUTOMOTIVE ENGINE REPAIR (4)
This course is a study of the principles of operation and problem diagnoses of the internal combustion engine. The theory of operation of the various engines is presented. Engines will be properly disassembled, parts identified, inspected, measured, and reassembled. Proper testing and break-in procedures along with approved diagnostic troubleshooting procedures will be emphasized. Prerequisite: AER1082C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=133.68

AER1198C AUTOMOTIVE ENGINE REPAIR (4)
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.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=133.68

AER1396C GM MANUAL DRIVE TRAIN AND AXLES (4)
A course designed to teach the principles and operations of manual transmissions and transaxles, clutches, overdrive units, pressure plates, propeller shafts, differentials, and drive axles and to provide practical experience in diagnosing, removing, maintaining, and repairing transmissions and drive systems. Topics include manual transmissions, overdrive systems, drive lines, differentials, and axles. Applications include front wheel drive, rear wheel drive, 4-wheel drive and all-wheel drive. Special emphasis will be given to safety procedures, and the specific tools and instruments to be used. Prerequisite: AER1082C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=170.68

AER1496C GM STEERING AND SUSPENSION SYSTEMS (4)
The student will develop the knowledge and skills related to the operation and function of GM steering and suspension systems alignment, testing, diagnosis and repair of modern GM vehicle systems will be emphasized. GM courses related to steering and suspension systems will be included in the curriculum. These are subject to change as new courses replace outdated and obsolete courses. Special emphasis will be given
to safety procedures and the specific tools and instruments to be used. Prerequisite: AER1082C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=154. 68

AER1594C GM BRAKE SYSTEMS AND CHASSIS REPAIR (4)
This course is a study of the theory and operation of GM brake systems. Students will learn all aspects of the diagnosis, repair and testing of GM brake systems including drum and disc brakes and power brake operation and repair. GM courses related to brake systems will be included in the curriculum. These are subject to change as new courses replace outdated and obsolete courses. Special emphasis will be given to safety procedures, and specific tools, and equipment to be used. Prerequisite: AER1082C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=160. 68

AER1690C GM ELECTRICAL SYSTEMS (4)
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. Prerequisite: AER1082C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=159. 68

AER1694C GM ELECTRONICS (4)
This course will continue the study of automotive electricity and electronics. Beginning with a review of semiconductor diodes and transistors, and continuing on through digital devices and microprocessors as applied to automotive systems. Emphasis will be placed on theory of operation, testing, and troubleshooting of microprocessor controls and systems. Prerequisite: AER1082C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=136. 68

AER1695C ELECTRONICS (4)
A course designed to teach the fundamental principles of electronics and to introduce the application of electronics in the modern automobile.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=136. 68

AER1698C ELECTRICAL SYSTEMS (4)
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.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=159. 68

AER2291C GM AUTOMATIC TRANSMISSIONS AND TRANSAXLES (4)
A course designed to teach the principles and operations of automatic transmissions and transaxles, and to provide practical experience in diagnosing, removing, maintaining, and repairing automatic transmissions and transaxles. Applications include front wheel drive, rear wheel drive, 4-wheel drive and all-wheel drive. Special emphasis will be given to safety procedures, and the specific tools and instruments to be used. Prerequisite: AER1082C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=160. 18

AER2298C AUTOMATIC TRANSMISSIONS AND TRANSAXLES (4)
A course designed to teach the principles, operations, diagnosis and repair of automatic transmissions and transaxles. Special emphasis will be given to safety procedures and the specific tools and instruments used.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=160. 18

AER2398C MANUAL DRIVE TRAIN AND AXLES (4)
A course designed to teach the principles, operations, diagnosis and repair of manual transmissions and transaxles, drive shafts, axles, clutches and four-wheel drive systems. Special emphasis will be given to safety and the specific tools and instruments to be used.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=170.68

**AER2498C  STEERING AND SUSPENSION SYSTEMS (4)**
A course designed to teach the principles of steering systems, suspension systems, and wheel alignment and to provide practical experience in repairing automobile suspension and steering systems, aligning front ends and balancing tires. Topics include wheel balancing, suspension systems, suspension angle and lines, wheel alignment, standard steering gears, power steering systems and frames. Special emphasis will be given to safety procedures, and the specific tools and instruments to be used. Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=154.68

**AER2598C  BRAKE SYSTEMS AND CHASSIS REPAIR (4)**
A course to teach the principles and operations of brake systems including disc systems, split systems, hydraulic cylinders, valving systems, traction control systems, and to provide practical experience in the repair of these systems. Topics include basic brake theory, drum brake systems, split systems, disc brake systems, hydraulic cylinders, machining and measuring techniques, power boosters, and road tests procedures. Special emphasis will be given to safety procedures and specific tools and equipment to be used.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=160.68

**AER2758C  HEATING AND AIR CONDITIONING THEORY (4)**
A course designed to teach the principles of 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.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=229.68

**AER2798C  GM HEATING AND AIR CONDITIONING THEORY (4)**
A course designed to teach the principles and operations of automotive heating systems, air conditioning systems and accessories, to provide practical experience in testing, analyzing, installing and repairing heating systems, air conditioning systems, air conditioning tools and equipment, lines, fittings, and valves, operational checks and adjustment, minor repairs, and the special tools and instruments to be used.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=229.68

**AER2895C  ADVANCED ENGINE PERFORMANCE (4)**
A course designed to teach the latest in computer engine controls, electronic fuel injection systems, emission controls and electronic instrumentation systems. This course includes theory of operation and construction, troubleshooting and repair.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=170.43

**AER2896C  GM ENGINE PERFORMANCE (4)**
This course is designed to teach entry level skills in intake and exhaust systems, fuel systems, carburetors, and emission control systems. In addition, GM-ASEP students will include GM specific instruction based on GM-STG course number 16009. 10 fuel injection diagnoses, and GM-STG course number 16030. 02 on board diagnostics generation II will be covered. Prerequisite: AER1690C AER1694C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=170.43

**AER2898C  ENGINE PERFORMANCE (4)**
A course designed to teach the principles and procedures of engine tune up and repair, and emission control systems.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=170.43

**AER2899C  GM ADVANCED ENGINE PERFORMANCE (4)**
This course is designed to teach job entry skills in the diagnosis and repair of drivability problems. Topics covered include engine performance and electrical and computer system operations. Emphasis is placed on manufacturer's diagnostic charts and diagnostic equipment. Use of scanners...
on both carburetor and fuel injected vehicles will be addressed. In addition, GM-ASEP students will include GM specific instruction based on GM-STG course number 16003. 01 engine performance. Prerequisite: AER2896C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=170. 43

AER2949 CO OP WORK EXPERIENCE (3)
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.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=21. 43

AER2951 GM INTERNSHIP I (3)
This course is a companion to electrical systems I, and air conditioning and heating. In order to meet the state of Florida, N. A. T. E. F. and general motors ASEP standards, interns must complete 100 hours on-the-job learning experience in electrical systems and 100 hours on-the-job learning experience in heating and a/c related repair while working under the mentorship of an experienced technician, students must document the required hours and master the student performance standards.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=21. 43

AER2952 GM INTERNSHIP II (3)
This course is a companion to steering and suspension and brake systems. In order to meet the state of Florida, N. A. T. E. F. , and general motors ASEP standards, interns must complete 100 hours on-the-job learning experience in steering and suspension repairs, and 100 hours on-the-job learning experience in brake systems related repair. While working under the mentorship of an experienced technician, students must document the required hours and master the student performance standards.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=21. 43

AER2953 GM INTERNSHIP III (3)
This course is a companion to automotive electrical and electronics and advanced engine performance. In order to meet the state of Florida, N. A. T. E. F. , and general motors ASEP standards interns must complete 100 hours on- the-job learning experience in electrical repairs, number 14. 0-14. 47 and 100 hours on-the-job learning experience in advanced engine performance related repair, task number 16. 00-16. 43. While working under the mentorship of an experienced technician, students must document the required hours and master the students' performance standards.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=21. 43

AER2954 GM INTERNSHIP IV (3)
This course is a companion to engines transmissions in order to meet the state of Florida, N. A. T. E. F., and general motors ASEP standard interns must complete 100 hours on-the-job learning experience in engine repairs, number 09. 0-09. 61 and 100 hours on-the-job learning experience transmissions related repairs. While working under the mentorship of an experienced technician, students must document the required hours and master student performance standards.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=21. 43

AFR1101 FIRST YEAR AIR FORCE ROTC. (A) (1)
This is a survey course designed to introduce students to the U. S. Air Force Reserve Officer Training Corps. Featured topic include: officerhip and professionalism, military customs and courtesies, Air Force officer opportunities and an introduction to communication skills. A leadership laboratory is included and provides cadets with leader/follower experiences. Instruction is at the University of Miami campus (PH: 305-284-2870). This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=0. 00

AFR1111 FIRST YEAR AIR FORCE ROTC (B) (1)
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). This course can be used for the AA degree.Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=0. 00
AFR2130 SECOND YEAR AIR FORCE ROTC (A) (I)
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). This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=0.00

AFR2131 SECOND YEAR AIR FORCE ROTC (B) (I)
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). This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=0.00

AMH2010 HISTORY OF THE UNITED STATES TO 187 (3)
This course is a survey of American history from pre-Columbus to 1877 that provides a general history of the political, economic, cultural, and social development of American society. Special emphasis is placed upon the colonial period, the American Revolution, the rise of American Nationalism, the antebellum U. S., the U. S. Civil War, and the Reconstruction period. Students will also study the introductory concepts of history reading, writing, and methods. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AMH2011 SURVEY OF AFRICAN AMERICAN HISTORY (3)
This a survey course of African American History including the history of ancient and medieval Africa, the emergence and evolution of the Atlantic Slave Trade, and the African American experience in the Western Hemisphere from the sixteenth century to the twenty-first century. Emphasis will be placed on the African American's economic, political, and cultural development and their contributions to American society. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AMH2020 HISTORY OF THE UNITED STATES SINCE 1945 TO THE (3)
This survey course of American history since 1877 provides students with a general history of the political, economic, cultural, and social development of American society. Special emphasis is placed upon U. S. expansion, progressivism, foreign relations, social movements, and political developments at the turn of the twentieth century and beyond. Students will also study the introductory concepts of history reading, writing, and methods. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AMH2035 UNITED STATES HISTORY: 1945 TO THE (3)
This survey course of the United States since 1945 provides students with a general history of the political, economic, cultural, social, military, and diplomatic development of American society. Special emphasis is placed upon the end of World War II, the politics of the Cold War at home and abroad, the social movements of the postwar era, the changing U. S. economy since 1945, & 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. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
AML2010 AMERICAN LITERATURE: COLONIAL TO 1900 (3)
Students will be introduced to works which represent the diverse literature emerging from America up till 1900. Works may be selected from authors such as Anne Bradstreet, James Fenimore Cooper, Kate Chopin, Emily Dickinson, Frederick Douglass, Ralph Waldo Emerson, Nathaniel Hawthorne, Harriet Jacobs, Thomas Jefferson, Sarah Orne Jewett, Herman Melville, Edgar Allan Poe, Mary Rowlandson, Nat Turner, Mark Twain, and Walt Whitman. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AML2020 AMERICAN LITERATURE (3)
Students will be introduced to works which represent the diverse literature emerging from America since 1900. Texts may be selected from major authors such as Hemingway, Faulkner, Frost, Hughes, Millay, Plath, Ellison, Baldwin, Oates, Angelou, and Roth. Upon successful completion of the course students will understand the significant concepts, contexts, movements, figures, and works of American literature in the 20th and 21st century. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AML2600 AFRICAN AMERICAN LITERATURE (3)
Students will be introduced to works that represent diverse African American literature since 1746. Texts may be selected from major authors such as Angelou, Douglass, Hughes, Hurston, King, and Truth. Upon successful completion of the course, students will understand the significant concepts, contexts, movements, figures, and works of African American literature since 1746. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AML2631 US HISPANIC/LATINO LITERATURE (3)
A broad survey of US Hispanic/Latino Literature covering works from the New World Encounter to present era. Students will analyze texts that may be selected from authors such as Alvar Nunez Cabeza De Vaca, Hernando De Soto, Jose Marti, William Carlos Williams, Santiago Baca, Tato Laviera, Sandra Csineros, Rudolfo Anaya, Gloria Anzaldua, Reinaldo Arenas, Junot Diaz, Jennine Cap? Crucet, among others. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AMT0001C BASIC ELECTRICITY (3)
The study of laws and theory of electricity and its application to aircraft systems, components, and circuits, to include practical knowledge of the different types of complex circuitry found in modern aircraft. Student fee charged.
Lec Hrs=45 Lab Hrs=49 Oth Hrs=0 Fees=126.43

AMT0010C AIRCRAFT DRAWINGS (0)
This course covers aircraft drawings, care and use of blueprints, isometrics, orthographic and auxiliary projection lines and section, dimensions, limits, tolerances and allowances, geometric construction, practical layout work and identification of standard parts and material, use of instruments, drawing and interpretation of free hand sketches of repairs and alterations, and use of various types of charts and graphs.
Lec Hrs=12 Lab Hrs=9 Oth Hrs=0 Fees=0.00

AMT0020C WEIGHT AND BALANCE (0)
Familiarizes the student with the importance of weight and balance control, the procedures for weighing an aircraft, the computations necessary to arrive at current and balance data, and the disposition of weight and balance forms and records. The use of loading graphs and charts relating to the aircraft's center of gravity envelope is taught. Student fee charged.
Lec Hrs=20 Lab Hrs=7 Oth Hrs=0 Fees=70.43

AMT0030C FLUID LINES AND FITTINGS (0)
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.
Lec Hrs=10 Lab Hrs=16 Oth Hrs=0 Fees=150.43

AMT0040C MATERIALS AND PROCESSES (2)
Familiarizes students with the methods used to identify and select aircraft materials and with various heat treating processes. Provides
experience in the use of non-destructive methods of inspection and evaluation. Provides instruction in correct shop practices and procedures and the use of special tools. Areas covered are torque values and torquing methods, safety wiring, use of precision measuring equipment, shop safety, and technicians’ ethics and legal responsibilities.

Lec Hrs=46 Lab Hrs=38 Oth Hrs=0 Fees=111.

**AMT0050C GROUND OPERATIONS AND SERVICING (1)**
Familiarizes the student with the proper methods of starting ground operating, servicing and securing aircraft.

Lec Hrs=10 Lab Hrs=21 Oth Hrs=0 Fees=90.

**AMT0060C CLEANING AND CORROSION CONTROL (0)**
Provides experience in detecting, identifying, removal, and treatment of the various types of corrosion found on ferrous and non-ferrous metals. The course deals with the types of cleaners and methods of cleaning aircraft and aircraft components. Student fee charged.

Lec Hrs=12 Lab Hrs=14 Oth Hrs=0 Fees=91.

**AMT0070C APPLIED MATHEMATICS (0)**
Reviews principles of mathematical functions and studies their application to aircraft and powerplant maintenance operations. Student fee charged.

Lec Hrs=14 Lab Hrs=7 Oth Hrs=0 Fees=0.

**AMT0081C FAR’S, FORMS & PRIVILEGES (1)**
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. Student fee charged.

Lec Hrs=22 Lab Hrs=20 Oth Hrs=0 Fees=27.

**AMT0090C BASIC PHYSICS (0)**
Provides an understanding of energy and matter and how their relationships apply to aircraft maintenance.

Lec Hrs=17 Lab Hrs=9 Oth Hrs=0 Fees=0.

**AMT0110C AIRCRAFT WOOD STRUCTURES (0)**
Aircraft wood structures are covered in this section and familiarizes the student with the different types of wood used in aircraft structures as well as methods of repair to wood structures. Student fee charged.

Lec Hrs=9 Lab Hrs=2 Oth Hrs=0 Fees=67.

**AMT0115C AIRCRAFT COVERINGS (0)**
Student will gain knowledge and skills to inspect, test, and repair fabric-covering materials. The student will be able to select and apply all types of fabric covering, including the synthetics types, and use of proper materials to finish the material. Student fee charged.

Lec Hrs=8 Lab Hrs=4 Oth Hrs=0 Fees=86.

**AMT0120C AIRCRAFT FINISHES (1)**
Student will acquire the ability to properly use a paint spray gun to apply various types of finishes on a variety of surfaces. The student will be able to apply trim lines and aircraft identification number, touch up paint defects, and identify and select aircraft finishing materials. Student fee charged.

Lec Hrs=10 Lab Hrs=20 Oth Hrs=0 Fees=193.

**AMT0130C SHEET METAL STRUCTURES (5)**
Student is provided with knowledge and skills needed to inspect, maintain, and repair sheet metal structures and components. The course provides the student an introduction to fiberglass, composite and other type non-metallic structural materials and methods of construction using these materials. Student fee charged.

Lec Hrs=41 Lab Hrs=116 Oth Hrs=0 Fees=573.

**AMT0140C AIRCRAFT WELDING (1)**
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. Lab fee is required.

Lec Hrs=15 Lab Hrs=25 Oth Hrs=0 Fees=195.

**AMT0155C ASSEMBLY AND RIGGING (2)**
Student will explain and compare aircraft design features in subsonic, transonic, and supersonic aircraft. They will be able to assemble and rig various aircraft control systems, analyzing and correcting faulty flight characteristics. Student fee charged.

Lec Hrs=20 Lab Hrs=45 Oth Hrs=0 Fees=179.43

AMT0160C AIRFRAME INSPECTION (0)
Students will acquire the knowledge and skills needed to perform a 100 hour inspection of an aircraft. The student will demonstrate knowledge of FARs by checking appropriate A. D.’s classifying repairs, and pinpointing specific service problems. The student will complete the required maintenance forms, records, and inspection reports required by Federal Air Regulations. Student fee charged.
Lec Hrs=5 Lab Hrs=15 Oth Hrs=0 Fees=90.43

AMT0200C LANDING GEAR SYSTEMS (3)
Student will receive training in the proper methods of inspection, servicing and repair of landing gear retraction systems, shock struts, brakes, wheels, tires and steering systems. Rigging of various types retractable landing gear systems will be covered in detail. Student fee charged.
Lec Hrs=35 Lab Hrs=50 Oth Hrs=0 Fees=218.43

AMT0210C HYDRAULIC AND PNEUMATICS SYSTEMS (2)
The student will study the theory of operation, maintenance requirements, and adjustments of various hydraulic components and systems. The course will provide the student with the knowledge of pneumatics as used in aircraft operation. The course covers fluid flow, identifies the various actuating units, type of seals, pumps, and differences between hydraulics and pneumatics. Student fee charged.
Lec Hrs=35 Lab Hrs=40 Oth Hrs=0 Fees=177.43

AMT0220C CABIN ATMOSPHERE CONTROL SYSTEMS (1)
This unit covers the various systems used to condition air and cabin pressurization as well as practical experience in inspecting, checking, troubleshooting, and servicing the oxygen system. Student fee charged.
Lec Hrs=20 Lab Hrs=30 Oth Hrs=0 Fees=141.43

AMT0230C AIRCRAFT INSTRUMENT SYSTEMS (1)
A basic familiarization of aircraft instruments and their function to include removal, installation, and the installed testing of such instruments. Student fee charged.
Lec Hrs=15 Lab Hrs=10 Oth Hrs=0 Fees=123.43

AMT0240C COMMUNICATIONS AND NAVIGATION SYSTEMS (1)
This course introduces the student with basic auto pilot operation and familiarizes him with the installation requirements and use of the various communication and navigation systems. Student fee charged.
Lec Hrs=25 Lab Hrs=5 Oth Hrs=0 Fees=102.43

AMT0250C AIRCRAFT FUEL SYSTEMS (1)
The student is provided with the knowledge and skills needed to maintain fuel systems and fuel system components. He/she will be able to inspect, check, maintain, and repair aircraft fuel system components, fuel dump systems, fuel management and transfer systems, and perform refueling operations. Student fee charged.
Lec Hrs=17 Lab Hrs=23 Oth Hrs=0 Fees=156.43

AMT0260C AIRCRAFT ELECTRICAL SYSTEMS (3)
The types and characteristics of aircraft electrical circuits and components are compared and evaluated. Advanced electrical systems as used in corporate and airline aircraft are studied. The course includes troubleshooting and repairs of AC and DC electrical systems and equipment. Student fee charged.
Lec Hrs=45 Lab Hrs=55 Oth Hrs=0 Fees=255.43

AMT0270C POSITION AND WARNING SYSTEMS (1)
This course presents the student with the inspection, servicing and maintaining of position and warning systems. Included in this area are navigation lights, beacons, and lights indicating
the position of various aircraft components. Student fee charged.
Lec Hrs=10 Lab Hrs=20 Oth Hrs=0 Fees=118.

**AMT0285C ICE, RAIN, & FIRE PROTECTION (1)**
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. Student fee charged.
Lec Hrs=10 Lab Hrs=20 Oth Hrs=0 Fees=118.

**AMT0300C RECIPROCATING ENGINES (5)**
The course covers theory and fundamental requirements for aircraft engines, basic parts of internal combustion engines, 2 stroke and 4 stroke cycle, power measurements and calculations, conversion of heat energy into mechanical energy, horsepower, piston displacement, compression ratio, types of horsepower, crankcase assembly, reduction gearing, crankshafts, and rod assemblies, cylinder and piston assemblies, and bearings used in reciprocating engines. Student fee charged.
Lec Hrs=45 Lab Hrs=107 Oth Hrs=0 Fees=569.

**AMT0312C TURBINE ENGINES & TURBINE ENGINES T (4)**
A thorough study of the theory of operation of turbine engines and the function of the related engine components such as compressors, fuel controls, fuel pumps, governors, turbines, etc. Course encounters disassembly, inspection, minimal repairs reassembly test run, and final adjustment. Corequisites: AMT0300, AMT0400, AMT0420, AMT0320. Student fee charged.
Lec Hrs=50 Lab Hrs=97 Oth Hrs=0 Fees=324.

**AMT0320C ENGINE INSPECTION (1)**
A course study of 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. Student fee charged.
Lec Hrs=10 Lab Hrs=22 Oth Hrs=0 Fees=127.

**AMT0400C ENGINE INSTRUMENT SYSTEMS (1)**
Students will have knowledge of operation, installation, marking and interpretation of powerplant instruments powered by or actuated by non-electrical means. They will be able to install, adjust, and calibrate instruments in accordance with FAA and manufacture's recommendations. This course will provide experience in inspection, checking, servicing, troubleshooting, and repair of engine instrument systems that are electrical in nature. Student fee charged.
Lec Hrs=12 Lab Hrs=19 Oth Hrs=0 Fees=106.

**AMT0410C ENGINE FIRE PROTECTION SYSTEMS (0)**
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. Student fee charged.
Lec Hrs=5 Lab Hrs=10 Oth Hrs=0 Fees=95.

**AMT0420C ENGINE ELECTRICAL SYSTEMS & APU'S (2)**
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. Student fee charged.
Lec Hrs=31 Lab Hrs=38 Oth Hrs=0 Fees=204.

**AMT0435C LUBRICATION SYSTEMS (1)**
Provides a comprehensive knowledge of the purpose and function of lubricants and lubrication system for powerplants. Gives experience in identifying and selecting lubricants, as well as, inspecting, checking, servicing and troubleshooting repair of the system and components. Student fee charged.
AMT0440C IGNITION SYSTEMS (3)
Students will have knowledge of the operation, repair, inspection, and service of reciprocating and jet power plant ignition systems. They will be able to overhaul and troubleshoot the various components of each system. Student fee charged. Lec Hrs=16 Lab Hrs=2 Oth Hrs=0 Fees=160.

AMT0450C ENGINE FUEL SYSTEMS (1)
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. Student fee charged. Lec Hrs=8 Lab Hrs=12 Oth Hrs=0 Fees=109.

AMT0451C FUEL METERING SYSTEMS (2)
Provides the student with the necessary information and practice necessary to inspect, check, service, troubleshoot, and repair reciprocating and turbine fuel metering system. The theory and practical application of carburetion, fuel injection systems, and water injection systems are also learned. Fuel pumps, filters, and strainers are discussed and practical experience is gained in these areas. Student fee charged. Lec Hrs=26 Lab Hrs=36 Oth Hrs=0 Fees=315.

AMT0460C INDUCTION SYSTEMS (1)
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. Student fee charged. Lec Hrs=11 Lab Hrs=14 Oth Hrs=0 Fees=139.

AMT0475C ENGINE COOLING & EXHAUST SYSTEMS (1)
This course provides the student with an understanding of the need for the various types of engine cooling systems. Gives experience in the inspection, checking, servicing, troubleshooting and repairing of engine cooling system. This course will also enable the student to comprehend the function of exhaust systems including turbo charging and thrust reversers. The student will gain experience in inspection, checking, troubleshooting, and repairing various types of exhaust systems. Student fee charged. Lec Hrs=11 Lab Hrs=15 Oth Hrs=0 Fees=122.

AMT0490C PROPELLERS AND UNDUCTED FANS (2)
This unit of instruction is designed to cover aircraft engine and turbo prop installations. Areas dealt with are: propeller fundamentals and terminology, synchronizing and ice control systems, identification and selection of propeller lubricants, balancing of propellers, propeller control systems, propeller governing systems, and installation, troubleshooting and removal of propellers. The theory of unducted fans is presented. Student fee charged. Lec Hrs=41 Lab Hrs=48 Oth Hrs=0 Fees=220.

AMT1001 BASIC ELECTRICITY (2)
Basic electricity. The study of laws and theory of electricity and its application to aircraft systems, components, and circuits, to include practical knowledge of the different types of complex circuitry found in modern aircraft. Lec Hrs=34 Lab Hrs=50 Oth Hrs=0 Fees=71.

AMT1010 AIRCRAFT DRAWINGS (1)
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. Lec Hrs=11 Lab Hrs=15 Oth Hrs=0 Fees=0.

AMT1020 WEIGHT AND BALANCE (1)
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.
Lec Hrs=16 Lab Hrs=23 Oth Hrs=0 Fees=46.43

**AMT1030 FLUID LINES AND FITTINGS (1)**
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.
Lec Hrs=8 Lab Hrs=16 Oth Hrs=0 Fees=71.43

**AMT1040 MATERIALS AND PROCESSES (2)**
Familiarizes students with the methods used to identify and select aircraft materials and with various heat treating processes. Provides experience in the use of non-destructive methods of inspection and evaluation. Provides instruction in correct shop practices and procedures and the use of special tools. Areas covered are torque values and torquing methods, safety wiring, use of precision measuring equipment, shop safety, and technician's ethics and legal responsibilities.
Lec Hrs=39 Lab Hrs=41 Oth Hrs=0 Fees=46.43

**AMT1050 GROUND OPERATIONS AND SERVICING (1)**
Familiarizes the student with the proper methods of starting ground operating servicing and securing aircraft.
Lec Hrs=10 Lab Hrs=19 Oth Hrs=0 Fees=71.43

**AMT1060 CLEANING AND CORROSION CONTROL (1)**
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.
Lec Hrs=12 Lab Hrs=26 Oth Hrs=0 Fees=46.43

**AMT1070 APPLIED MATHEMATICS (1)**
Reviews principles of mathematical functions and studies their application to aircraft and powerplant maintenance operations.
Lec Hrs=13 Lab Hrs=7 Oth Hrs=0 Fees=0.00

**AMT1081 FAR'S, FORMS & PRIVILEGES (1)**
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. Student fee charged.
Lec Hrs=19 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**AMT1090 BASIC PHYSICS (1)**
Provides an understanding of energy and matter and how their relationships apply to aircraft maintenance.
Lec Hrs=13 Lab Hrs=7 Oth Hrs=0 Fees=0.00

**AMT1110 AIRCRAFT WOOD STRUCTURES (1)**
Aircraft wood structures are covered in this section and familiarizes the student with the different types of wood used in aircraft structures as well as methods of repair to wood structures. Student fee charged.
Lec Hrs=9 Lab Hrs=2 Oth Hrs=0 Fees=46.43

**AMT1115 AIRCRAFT COVERINGS (1)**
Student will gain knowledge and skills to inspect, test, and repair fabric covering materials. The student will be able to select and apply all types of fabric covering, including the synthetics types, and use of proper materials to finish the material.
Lec Hrs=8 Lab Hrs=4 Oth Hrs=0 Fees=61.43

**AMT1120 AIRCRAFT FINISHES (1)**
Student will acquire the ability to properly use a paint spray gun to apply various types of finishes on a variety of surfaces. The student will be able to apply trim lines and aircraft identification number, touch up paint defects, and identify and select aircraft finishing materials. Pre or Corequisite: AMT1110
Lec Hrs=10 Lab Hrs=20 Oth Hrs=0 Fees=61.43
AMT1130 SHEET METAL STRUCTURES (4)
Student is provided with knowledge and skills needed to inspect, maintain, and repair sheet metal structures and components. The course provides the student an introduction to fiberglass, composite and other type non-metallic structural material and methods of construction using these materials. Student fee charged.
Lec Hrs=41 Lab Hrs=116 Oth Hrs=0 Fees=96.43

AMT1140 AIRCRAFT WELDING (1)
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. Lab fee is required.
Lec Hrs=15 Lab Hrs=25 Oth Hrs=0 Fees=71.43

AMT1155 ASSEMBLY AND RIGGING (2)
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.
Lec Hrs=20 Lab Hrs=45 Oth Hrs=0 Fees=0.00

AMT1160 AIRFRAME INSPECTION (1)
Students will acquire the knowledge and skills needed to perform a 100 hour inspection of an aircraft. The student will demonstrate knowledge of FARs by checking appropriate A. D.'s classifying repairs, and pinpointing specific service problems. The student will complete the required maintenance forms, records, and inspection reports required by Federal Air Regulations.
Lec Hrs=5 Lab Hrs=15 Oth Hrs=0 Fees=46.43

AMT1200 LANDING GEAR SYSTEMS (2)
Student will receive training in the proper methods of inspection, servicing and repair of landing gear retraction systems, shock struts, brakes, wheels, tires and steering systems. Rigging of various types of retractable landing gear systems will be covered in detail.
Lec Hrs=35 Lab Hrs=50 Oth Hrs=0 Fees=71.43

AMT1210 HYDRAULIC AND PNEUMATICS SYSTEMS (2)
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.
Lec Hrs=35 Lab Hrs=40 Oth Hrs=0 Fees=71.43

AMT1220 CABIN ATMOSPHERE CONTROL SYSTEMS (1)
This unit covers the various systems used to condition air and cabin pressurization as well as practical experience in inspecting, checking, troubleshooting, and servicing the oxygen system. Student fee charged.
Lec Hrs=20 Lab Hrs=30 Oth Hrs=0 Fees=61.43

AMT1230 AIRCRAFT INSTRUMENTS SYSTEMS (1)
A basic familiarization of aircraft instruments and their function to include removal, installation, and the installed testing of such instruments.
Lec Hrs=15 Lab Hrs=10 Oth Hrs=0 Fees=61.43

AMT1240 COMMUNICATIONS AND NAVIGATION SYSTEM (1)
This course introduces the student with basic auto pilot operation and familiarizes him with the installation requirements and use of the various communication and navigation systems.
Lec Hrs=25 Lab Hrs=5 Oth Hrs=0 Fees=61.43

AMT1250 AIRCRAFT FUEL SYSTEMS (1)
The student is provided with the knowledge and skills needed to maintain fuel systems and fuel system components. He/she will be able to inspect, check, maintain, and repair aircraft fuel system components, fuel dump systems, fuel management and transfer systems, and perform refueling operations.
Lec Hrs=17 Lab Hrs=23 Oth Hrs=0 Fees=61.43
AMT1260 AIRCRAFT ELECTRICAL SYSTEMS (3)
The types and characteristics of aircraft electrical circuits and components are compared and evaluated. Advanced electrical systems as used in corporate and airline aircraft are studied. The course includes troubleshooting and repairs of AC and DC electrical systems and equipment.
Lec Hrs=45 Lab Hrs=55 Oth Hrs=0 Fees=71.

AMT1270 POSITION AND WARNING SYSTEMS (1)
This course presents the student with the inspection, servicing and maintaining of position and warning systems. Included in this area are navigation lights, beacons, and lights indicating the position of various aircraft components.
Lec Hrs=10 Lab Hrs=20 Oth Hrs=0 Fees=61.

AMT1285 ICE, RAIN, & FIRE PROTECTION (1)
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. Student fee charged.
Lec Hrs=10 Lab Hrs=20 Oth Hrs=0 Fees=61.

AMT2300 RECIPROCATING ENGINES (5)
The course covers theory and fundamental requirements for aircraft engines; basic parts of internal combustion engines, 2 stroke and 4 stroke cycle, power measurements and calculations conversion of heat energy into mechanical energy, horsepower, piston displacement, compression ratio, types of horsepower, crankcase assembly, reduction gearing, crankshafts and rod assemblies, cylinder and piston assemblies, and bearings used in reciprocating engines.
Lec Hrs=45 Lab Hrs=107 Oth Hrs=0 Fees=171.

AMT2312 TURBINE ENGINES (4)
A thorough study of the theory of operation of turbine engines and the function of the related engine components such as compressors, fuel controls, fuel pumps, governors, turbines, etc. Course encounters disassembly, inspection, minimal repairs reassembly test run, and final adjustment.
Lec Hrs=55 Lab Hrs=55 Oth Hrs=0 Fees=96.

AMT2320 ENGINE INSPECTION (1)
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.
Lec Hrs=10 Lab Hrs=22 Oth Hrs=0 Fees=61.

AMT2400 ENGINE INSTRUMENT SYSTEMS (1)
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.
Lec Hrs=12 Lab Hrs=19 Oth Hrs=0 Fees=46.

AMT2410 ENGINE FIRE PROTECTION SYSTEMS (1)
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.
Lec Hrs=5 Lab Hrs=10 Oth Hrs=0 Fees=61.

AMT2420 ENGINE ELECTRICAL SYSTEMS & APU'S (2)
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. Student fee charged.
AMT2435 LUBRICATION SYSTEMS (1)
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.
Lec Hrs=16 Lab Hrs=26 Oth Hrs=0 Fees=96.43

AMT2440 IGNITION SYSTEMS (2)
Students will have knowledge of the operation, repair, inspection, and service of reciprocating and jet power plant ignition systems. They will be able to overhaul and troubleshoot the various components of each system.
Lec Hrs=37 Lab Hrs=47 Oth Hrs=0 Fees=96.43

AMT2450 ENGINE FUEL SYSTEMS (1)
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.
Lec Hrs=8 Lab Hrs=12 Oth Hrs=0 Fees=61.43

AMT2451 FUEL METERING SYSTEMS (2)
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, strainers are discussed and practical experience is gained in these areas.
Lec Hrs=26 Lab Hrs=36 Oth Hrs=0 Fees=96.43

AMT2460 INDUCTION SYSTEMS (1)
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.
Lec Hrs=11 Lab Hrs=14 Oth Hrs=0 Fees=0.00

AMT2475 ENGINE COOLING & EXHAUST SYSTEMS (1)
This course provides the student with an understanding of the need for the various types of engine cooling systems. Gives experience in the inspection, checking, servicing, troubleshooting and repairing of engine cooling systems. This course will also enable the student to comprehend the function of exhaust systems including turbo charging and thrust reversers. The student will gain experience in inspection, checking, troubleshooting, and repairing various types of exhaust systems. Student fee charged.
Lec Hrs=11 Lab Hrs=15 Oth Hrs=0 Fees=61.43

AMT2490 PROPELLERS AND UNDUCTED FANS (2)
This unit of instruction is designed to cover aircraft engine and turbo prop installations. Areas dealt with are: propeller fundamentals and terminology, synchronizing and ice control systems, identification and selection of propeller lubricants, balancing of propellers, propeller control systems, propeller governing systems, and installation, troubleshooting and removal of propellers. The theory of unducted fans is presented. Student fee charged.
Lec Hrs=41 Lab Hrs=48 Oth Hrs=0 Fees=96.43

ANT2000 INTRODUCTION TO ANTHROPOLOGY (3)
An introductory study of the biological evolution and cultural development of human customs, social organization, and institutions. The student is introduced to the major fields of study undertaken by anthropologists. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ANT2140 INTRO TO ARCHAEOLOGY (3)
The study of past cultures and the ongoing record of human history. This course reviews the major techniques and theories used to interpret culture change through time. A student must earn a grade of "C" or higher to meet the requirements of the Gordon rule. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
ANT2211 INTRODUCTION TO WORLD ETHNOLOGY PEO (3)
A survey of cultures on differing levels of development, focusing upon subsistence, social organization, religion, art, and culture change. A student must earn a grade of "C" or higher to meet the requirements of the Gordon rule. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ANT2381 CULTURE AND SOCIETY OF SPAIN (3)
Spanish culture and society includes a study of Spanish life and character as it manifests itself in history, regional personality, celebrations, music, legendary figures, art and architecture. Special emphasis will be given to the southern part of Spain, Andalusia's, which conserves today the diverse cultural heritage of Europe, Africa, and the Orient (Near East). This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ANT2825 ANTHROPOLOGY FIELD SCHOOL (3)
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. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

 ANT2905 INDEPENDENT STUDY ANTHROPOLOGY (3)
A directed study course available to both majors and non-majors who wish to investigate a particular problem related to the field of Anthropology. The student will make application 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. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ARC1056C DIGITAL MEDIA (2)
Course is designed to provide a survey of current computer aided design software related to architecture and building construction. Lab work concentrates on a variety of computer applications applicable to the design process. Students will learn to apply virtual building technology to design, production, collaboration and information analysis of a project. This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=43.00

ARC1126C ARCHITECTURAL DRAWING (4)
An introduction to principles, methods and applications of architectural drawing. Basic drafting tools will be used to learn orthographic projection to draw multi-view drawings including architectural design floor plans, elevations and sections, single-view drawings including paraline axonometric drawings and perspective drawings including one- and two-point. This course can be used for the AA degree. Lec Hrs=16 Lab Hrs=48 Oth Hrs=0 Fees=37.00

ARC1301C ARCHITECTURAL DESIGN I (4)
This course covers basic two and three-dimensional design fundamentals, architectonic principles and architectural design skills. Techniques of model making are learned through explorations in defining and understanding architectural space. Pre or Corequisite: ARC1126C. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=37.00

ARC1302C ARCHITECTURAL DESIGN II (4)
This course furthers the study of three-dimensional design fundamentals, architectural space and architectural principles through the application of more advanced model making techniques, orthographic drawing and one and two point perspectives. The architectural design process is studied through the analysis and resolution of basic building programs and basic natural and man-made environmental factors. Prerequisite: ARC1301C. Pre or Corequisite: ARC2201C. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=37.00

ARC1701 SURVEY OF ARCHITECTURAL HISTORY (3)
A general survey of social, political, and cultural factors which have generated architecture from prehistoric times through the Fifteenth Century. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ARC2201 THEORY OF ARCHITECTURE (3)
This course provides an understanding of architectonic elements, principles and aesthetics in architecture. It analyzes their application in contemporary and historical architecture and relates their application to architecture design studio solutions. The course also covers the work and philosophies of contemporary architects. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ARC2303C ARCHITECTURAL DESIGN III (4)
This course emphasizes the analysis and resolution of the natural and man-made environmental context as a generator of architectural design ideas. The analysis of architectural building programs and architectonic principles are applied to further define the organization, form, circulation and function of architectural space in buildings. Prerequisite: ARC1302C ARC2201. This course can be used for the AA degree. Lec Hrs=16 Lab Hrs=96 Oth Hrs=0 Fees=37.00

ARC2304C ARCHITECTURAL DESIGN IV (4)
This course covers the development of architectonic conceptual ideas from program requirements and contextual factors as generators of architectural design. Architectonic principles of enclosure, massing, articulation of form, proportions, geometry, scale and structures are applied in the development of imagery for building design. A portfolio is created from each student's best work for the purpose of transfer admission to a university program. Prerequisite: ARC2303C. This course can be used for the AA degree. Lec Hrs=16 Lab Hrs=96 Oth Hrs=0 Fees=37.00

ARC2461 MATERIALS AND METHODS OF CONSTRUCTION (4)
Introduction to materials and methods of construction covering the evaluation of construction materials, functional applications and code requirements in the use of wood, masonry, concrete, steel and other materials. This course can be used for the AA degree. Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ARC2580 STRUCTURES (4)
Basic study in the principles and evaluations of structures as applied to architecture. Major topics of study include statics, stress, and the characteristics of beam and column behavior. This course will enable the student to develop a structural sense in creating architectural solutions. Prerequisite: MAC1105. This course can be used for the AA degree. Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ARH2000 ART APPRECIATION (3)
Art Appreciation is a course for non-art majors that introduces the foundations of art, including style, form, media, meaning, and history. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ARH2050 WORLD ART: PREHISTORY TO GOTHIC (3)
Art History: Prehistory to Gothic is a chronological survey and analysis of art from prehistory to approximately 1400, placing major works in a historical and stylistic context and emphasizing world art. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ARH2051 WORLD ART: RENAISSANCE TO MODERN (3)
Art History: Renaissance to Modern is a chronological survey and analysis of world art from Renaissance to Modern, placing major works in a historical and stylistic context and emphasizing European and Modern art. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ARH2351 SPANISH ART HISTORY (3)
Spanish Art History includes the study of outstanding examples of architecture, painting and sculpture, emphasizing the early Roman and
Moorish contributions as well as the great Spanish painters of the Renaissance and the 19th and 20th Centuries. Included in this course are cultural trips to museums, galleries and monuments in Seville. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**ART1201C 2 D DESIGN (3)**
Two-dimensional study of form, principles of organization, and the elements of design fundamental for creative work in 2-D visual arts. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=4.00

**ART1203C 3D DESIGN (3)**
Three-dimensional study of form, principles of organization and elements of design fundamental for creative work in 3-D visual arts. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=40.00

**ART1300C DRAWING I (3)**
Still life and landscape composition utilizing wet and dry drawing media. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=4.00

**ART1301C DRAWING II (3)**
An extension of the content of Drawing I with increased concentration upon analytical description, pictorial composition, and drawing as a means of visual communication of ideas. Prerequisite: ART1300C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td><strong>ART1600C COMPUTER ART (3)</strong></td>
<td>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. This course can be used for the AA degree.</td>
<td>Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=40.00</td>
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<tr>
<td><strong>ART2205C COLOR THEORY (3)</strong></td>
<td>A basic course in the exploration of color theories, color systems, and color relativity in regard to optical sensation, lighting variation and psychological impact. This course can be used for the AA degree.</td>
<td>Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00</td>
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<tr>
<td><strong>ART2330C LIFE DRAWING (3)</strong></td>
<td>Study of human and animal forms utilizing various wet and dry media. Prerequisite: ART1300C. This course can be used for the AA degree.</td>
<td>Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=31.00</td>
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<tr>
<td><strong>ART2400C BEGINNING PRINTMAKING (3)</strong></td>
<td>A study of the processes and techniques in intaglio, polymer light-sensitive and relief printmaking. Prerequisite: ART1201C ART1300C. This course can be used for the AA degree.</td>
<td>Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=40.00</td>
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<tr>
<td><strong>ART2500C PAINTING I (3)</strong></td>
<td>An introduction to creative techniques and composition applied to oil painting and acrylic media. Prerequisite: ART1201C ART1300C. This course can be used for the AA degree.</td>
<td>Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00</td>
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<tr>
<td><strong>ART2501C PAINTING II (3)</strong></td>
<td>A creative exploration of oil, acrylic techniques and/or water media with an emphasis on composition. Prerequisite: ART2500C. This course can be used for the AA degree.</td>
<td>Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00</td>
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<tr>
<td><strong>ART2540C WATERCOLOR (3)</strong></td>
<td>A creative exploration of watercolor techniques and media with an emphasis on composition. This course can be used for the AA degree.</td>
<td>Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00</td>
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ART2623C 3D COMPUTER MODELING FOR ANIMATION (3)
This course is an introductory level course in 3D animation. Students create complex animations which are carefully planned through storyboarding techniques. Students will complete 3D animation projects and follow the 3D animation process, practicing and applying various features of the 3D animation software package. Prerequisite: ART1300C. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=35.00

ART2701C SCULPTURE (3)
A three-dimensional study of form and concept utilizing physical material to occupy real space either free standing or bas-relief. The principles of organization and the element of design fundamentals are carried over and expand from 3-D design. Prerequisite: Instructor permission or permission or prerequisite: ART1203C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=40.00

ART2750C CERAMICS I (3)
Study of basic ceramic shaping techniques, glazing, decorating and firing. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=35.00

ART2751C CERAMICS II (3)
A study of advanced techniques in ceramics synthesizing basic skills with more advanced concepts and techniques of forming clay, surface decoration, glazing and firing. Prerequisites: instructor's approval or Prerequisite: ART2750C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=35.00

ART2752C CERAMICS: THROWING ON THE POTTERS W (3)
A fine arts study of advanced techniques in ceramics emphasizing concepts and techniques of forming clay on the wheel, surface decoration, glazing and firing. Prerequisite: ART2750C. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=35.00

ART2754C CERAMICS: HAND-BUILDING (3)
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. Prerequisite: ART2750C. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=35.00

ART2905 INDEPENDENT STUDY (3)
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. Prerequisite: Instructor permission or Prerequisite: ART1201C ART1202C ART1300C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00

ART2906 INDEPENDENT STUDY: CERAMICS (3)
A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the ceramics process. Prerequisite: Instructor permission or Prerequisite: ART2750C ART2751C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=35.00

ART2907 INDEPENDENT STUDY: DRAWING (3)
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 and Prerequisite: ART1300C ART2330C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00

ART2908 INDEPENDENT STUDY: SCULPTURE (3)
A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the sculpture process. Prerequisite: instructor permission or Prerequisite: ART1203C ART2701C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=36.00
**ART2909 INDEPENDENT STUDY: PAINTING (3)**
A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to the painting process. Prerequisite: ART2500C ART2501C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00

**ART2931C ART SPECIAL TOPICS: (SPECIFY MEDIUM (3))**
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. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=0.00

**ART2932C SPECIAL TOPIC: CERAMICS (3)**
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 of the receiving institution. Prerequisite: Instructor permission or Prerequisite: ART2750C ART2751C. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=35.00

**ART2949 CO OP WORK EXPERIENCE (3)**
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**ART2950 SEMINAR IN ART (3)**
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. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**ASC1010 HISTORY OF AVIATION (3)**
A survey of aviation from its beginning with early myths, through gliders, balloon flights and powered flight to the present jet age. Includes effects of wars on the development of civil and military aircraft and discusses significant personnel flights and aircraft in tracing the advancement of general, commercial, and military aircraft. The major emphasis of the course will be directed towards the development of aviation in the United States. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**ASC1100 NAVIGATIONAL SCIENCE I (3)**
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. Prerequisite: College Placement Testing (CPT) scores must place student into college-level courses for English, reading and math; or have instructor's permission. Corequisite: ATT1100. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**ASC2120 AVIATION WEATHER (3)**
A study of the basic concepts of meteorology, temperature pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing, and fog analysis and use of weather data; interpretation of the U. S. Weather Bureau maps, reports and forecasts. Prerequisite: private pilot's license; instructor's permission; or Prerequisite: ASC1100 ATT1100 This course can be used for the AA degree. Corequisite: ASC2110 ATT2120
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
ASC1550 AERODYNAMICS (3)
An analysis of the physical laws and aerodynamic principles which govern the flight and performance of aircraft stability and control, weight and balance, and aircraft instruments affecting flight operational considerations of controllable pitch propellers, retractable gear, weather, and precision maneuvers. Prerequisite: private pilot's license or instructor's permission or Prerequisite: ASC1100 ATT1100
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ASC1610 AIRCRAFT ENGINES, STRUCTURES, AND S (3)
Aircraft engine types and theory of operation, materials and construction methods of aircraft structures operations of hydraulic, electrical, fuel, pressurization, and anti-icing, heating and instrument systems, including sources of power for their operation. Prerequisite: private pilot's license or instructor's permission or Prerequisite: ASC1100 ATT1100
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ASC2110 NAVIGATION SCIENCE II (3)
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 or Prerequisite: ASC1100 ATT1100

Corequisite: ASC1210 ATT2120
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ASC2230 AVIATION LAW AND REGULATIONS (3)
An introduction and analysis of the regulations and laws governing airport and airline operations, incorporating aviation safety. Topics of discussion include the major regulations to include: Federal Aviation Regulations (FARS) 77, 108, 121, 129, 135, 139, 150, 191, and NTSB 830. These topics will include navigable airspace, airport noise and the applicable Advisory Circulars (A/C) that explain compliance. Additionally, these topics of discussion will include an overview of how the regulations are governed and administered, compliance with overview of how the regulations are governed and administered, compliance with regulations, non-compliance, and management of government regulations.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ASC2472 HUMAN FACTORS IN FLIGHT AND AIR TRA (3)
This course discusses the human factor issues involved with flight and those affecting air traffic controllers. Students will learn significant aero-medical factors common to the aviation environment and the decision making process. Students will apply knowledge gained through the examination of NTSB accident reports outlining the causes and describing ways an accident could have been prevented. Prerequisite: ASC1100 ATT1100 ATT1810 ATT2820 Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ASC2870 AVIATION SAFETY (3)
The primary goal of this course is to provide aspiring aviation professionals with a comprehensive understanding and enhanced awareness of aviation safety. Class will participate in analyzing the probable cause of selected aviation accidents, review detailed analyses of accidents related to topics of human factors, runway incursions, weather, mid-air collisions and mechanical and maintenance issues. Federal agencies which regulate aviation with emphasis on those concerned with safety will also be studied. Prerequisite: ASC1100 ATT1100
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ASC2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ASL1140 AMERICAN SIGN LANGUAGE I (4)
Students will acquire the fundamental linguistic principles of American Sign Language and vocabulary totaling approximately 500 concepts,
both expressively and receptively. Cultural literacy will be enhanced related to deafness and Deaf culture through reading, writing, and the social environment of the Deaf Community. A variety of classroom literacy activities and exercises, supplemented by laboratory and/or multi-media presentations, will be utilized to develop communicative competence and an appreciation for cultural diversity. (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.) This course can be used for the AA degree. Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00

ASL1150 AMERICAN SIGN LANGUAGE II (4)
Students will acquire intermediate linguistic principles of American Sign Language and vocabulary totaling approximately 500 new concepts, both expressively and receptively. Cultural literacy will be enhanced related to deafness and Deaf culture through reading, writing, and the social environment of the Deaf Community. A variety of classroom literacy activities and exercises, supplemented by laboratory and/or multi-media presentations, will be utilized to develop communicative competence and an appreciation for cultural diversity. (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.) Prerequisite: ASL1140. This course can be used for the AA degree. Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00

ASL2160 AMERICAN SIGN LANGUAGE III (4)
Upon completion of this course, students will have acquired American sign language vocabulary totaling approximately 500 concepts and intermediate to advanced level linguistic principles of ASL, including finger-spelling. Use of the signing space to set up person, objects, place and time will be stressed. Information on the cultural and communication aspects of ASL will also be covered. Content builds upon the foundation established in ASL1140 and ASL1150. After completing the three courses, students should have a receptive and expressive sign vocabulary of approximately 1500 concepts. Students are strongly advised to check with the college or university of their choice for acceptance of these credits to fulfill their entrance and/or exit language requirements. Prerequisite: ASL1150. This course can be used for the AA degree. Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00

AST1002 HORIZONS IN ASTRONOMY (3)
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. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AST1003 ASTRONOMY OF THE SOLAR SYSTEM (3)
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. Prerequisite: MAT0028
This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AST1004 ASTRONOMY OF STARS AND Galaxies (3)
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. Prerequisite: MAT0028. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

AST1022L ASTRONOMY LABORATORY (1)
AST 1022L 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; AST 1002, AST 1003, or AST 1004. Students will create experiment reports and conduct telescopic observations. Pre or Corequisite: AST1003. This course can be used for the AA degree. Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=26.00

AST1037 SCIENTIFIC SEARCH FOR LIFE IN THE (3)
This interdisciplinary course examines the nature and history of life on earth, possible life-favoring environments within the solar system and in the detecting life in the universe at large. Topics of discussion include the evolution and biochemistry of terrestrial life, the formation of organic compounds in the solar system and other extraterrestrial environments, physical constraints, equipment, and strategies for detecting intelligent life in the universe. Prerequisite: MAT0028. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ATF1100 PRIMARY FLIGHT (3)
This course provides the flight training and experience required by the Federal Aviation Regulations (FAA) for a Private Pilot Certificate. Student must obtain FAA Private Pilot Certificate in order to receive credit for the course. Flight training fees are paid directly to the College in advance. Prerequisite: College Placement Testing (CPT) scores must place student into college-level courses for English, reading and math; or have instructor's permission. Corequisite: ASC1100 ATT1100 Lec Hrs=2 Lab Hrs=50 Oth Hrs=0 Fees=45.00

ATF2200 COMMERCIAL FLIGHT I (3)
This course continues the training and experience begun in primary flight. Together with ATF2210 and ATF2300, it provides the aeronautical experience required to qualify for the FAA Commercial Pilot Certificate with instrument rating under Federal Aviation Regulations. Flight training fees are paid directly to the College in advance. Prerequisite: private pilot's license or instructor's permission or Prerequisite: ATF1100 Corequisite: ASC1210 ASC2110 ATF2600 ATT2120 Lec Hrs=10 Lab Hrs=80 Oth Hrs=0 Fees=0.00

ATF2210 COMMERCIAL FLIGHT II (3)
This course continues the training and experience of Commercial Flight I. Together with ATF2200 and ATF2300, 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 completes coursework to obtain the instrument rating and begins commercial pilot training. Flight training fees are paid directly to the College in advance. Prerequisite: Instructor's approval or Prerequisite: ATF2200 Corequisite: ATT2110 Lec Hrs=10 Lab Hrs=80 Oth Hrs=0 Fees=0.00

ATF2300 COMMERCIAL FLIGHT III (3)
This is the final of the series of courses designed to provide the aeronautical experience for a FAA Commercial Pilot Certificate with instrument rating under Federal Aviation Regulations. During this course the student achieves qualification in complex air-craft. In order to receive credit for this course, the student must have earned a FAA Commercial Pilot Certificate. Flight training fees are paid directly to the College in advance. Prerequisite: Instructor's approval or Prerequisite: ATF2210 Lec Hrs=10 Lab Hrs=80 Oth Hrs=0 Fees=0.00

ATF2400 MULTI ENGINE TRANSITION (1)
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 a FAA multi-engine rating. Flight training fees are paid directly to the College in advance. Prerequisite: Private Pilot Certificate with Instrument Rating or Instructor's Approval Corequisite: ATF2630 Lec Hrs=5 Lab Hrs=20 Oth Hrs=0 Fees=0.00

ATF2500 FLIGHT INSTRUCTOR TRAINING (2)
This course provides the flight and ground instruction to train a commercial pilot to be a flight instructor. Course consists of the number of dual and solo flying hours and oral instruction required in each case to qualify the individual for a FAA flight instructor certificate. In order to
receive credit for this course, the student must have earned a FAA flight instructor certificate. Training fees are paid directly to the College in advance. Prerequisite: Commercial Pilot Certificate with Instrument Rating

**ATT2600 FLIGHT SIMULATOR TRAINING (1)**

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 or Prerequisite: ASC1100 ATT1100

Lec Hrs=15 Lab Hrs=30 Oth Hrs=0 Fees=0. 00

**ATT2630 BASIC INSTRUMENT SIMULATOR (1)**

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. Prerequisite: instructor's permission or Prerequisite: ASC1100 ATT1100 ATT1100 Corequisite: ATF2200

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=165. 00

**ATT100 AERONAUTICAL SCIENCE (3)**

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. Corequisite: ASC1100

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**ATT1810 ENVIRONMENT OF THE AIR TRAFFIC CONT (3)**

This course provides an understanding of the Air Traffic Controller's mission and working environment and presents a candid view of the Air Traffic Controller's language, tools and profession. Corequisite: ASC1100 ATT1100

ATT2820

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=36. 00

**ATT2110 COMMERCIAL FLIGHT THEORY (3)**

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 or Prerequisite: ASC1100 ATT1100

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**ATT2120 INSTRUMENT FLIGHT THEORY (3)**

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 Prerequisite: ASC1100 ATT1100

Corequisite: ASC1210 ASC2110

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
ATT2820 INTRODUCTION TO AIR TRAFFIC CONTROL (3)
This course covers fundamental topics such as history and an explanation of past decisions affecting current air traffic control systems, navigation, procedures and phraseology, separation of aircraft in the ATC system, an in-depth look at the future of air traffic control, and employment opportunities for air traffic controllers. Corequisite: ASC1100 ATT1100 ATT1810
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=37.00

ATT2821C ATC RADAR PROCEDURES WITH LAB (4)
This course covers fundamental requirements to work as a radar controller and builds on the knowledge obtained in prerequisite courses ATT1100, ASC1100, ATT1810, ATT2820, ATT2825C, ATT2822C. Topics such as radar rules and applications required by FAA J07110. Chapters 4, 8, and 6 are covered in this course. This course will be adapted to mirror a radar position in operation at Miami TRACON. In doing so, this course will teach the student the basic requirements needed to work as a radar controller in a terminal facility. Topics taught will include radar systems, radar identification, radar separation, vectoring, phraseology, and issuing approach clearances. The lab portion will mirror the Fort Lauderdale Executive Arrival/Departure Radar position. Prerequisite: ASC1100 ATT1100 ATT1810 ATT2820 ATT2822C
Lec Hrs=48 Lab Hrs=24 Oth Hrs=0 Fees=140.00

ATT2822C VFR TOWER OPERATIONS WITH LAB (4)
This course covers the J07110. 65 Air Traffic Control manual Chapter 3. Chapter cover fundamental rules and procedures required in a VFR tower for the safe and orderly flow of aircraft operating in a VFR or IFR environment. This course teaches the requirements needed in a terminal facility that utilizes air/ground communications, visual signaling, and other devices to provide ATC services to aircraft operating in the vicinity of an airport or a movement area. The lab portion will mirror the Fort Lauderdale Executive Airport or Tamiami-Kendall Executive Airport. The student will be required to demonstrate practical application of the rules and procedures in use at this airport. Prerequisite: ASC1100 ATT1100 ATT1810 ATT2820
Lec Hrs=48 Lab Hrs=24 Oth Hrs=0 Fees=247.00

ATT2824C ATC ENROUTE OPERATIONS WITH LAB (4)
This course covers the J07110. 65 Air Traffic Control Manual Chapters 5, 6, 7, 8, 9, 10, 11, 12, and 13, J07350. 7 Location Identifiers, IFR Enroute Low and High Altitude Charts. These orders cover the fundamental rules and procedures required in the Enroute environment commonly referred to as the CENTER. This course will teach the requirements needed to an enroute facility that utilizes air/ground communications and other devices to provide ATC services to aircraft operating along the Federal Airways and Jet Route Systems. The lab portion will mirror a sector in operation at Miami Center. The student will be required to demonstrate practical application of the rules and procedure in use at this center sector. Prerequisite: ASC1100 ATT1100 ATT1810 ATT2820
Lec Hrs=48 Lab Hrs=24 Oth Hrs=0 Fees=546.00

ATT2890 ATC CAPSTONE PROJECT (1)
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. Prerequisite: ASC1100 ASC1210 ASC1610 ASC2472 ATT1100 ATT1810 ATT2820 ATT2821C ATT2822CLec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=0.00

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

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**AVM2400 AIRPORT OPERATIONS INTERNSHIP I (3)**
Practical applicable 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 Prerequisite: AVM1440 AVM2301 AVM2410
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**AVM2301 GENERAL AVIATION MARKETING AND MANA (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**AVM2410 AIRPORT MANAGEMENT (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**AVM2450 AIRPORT PLANNING AND DESIGN (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**AVM2510 AIRLINE MANAGEMENT (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**AVM2941 AIRPORT OPERATIONS INTERNSHIP II (3)**
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 Prerequisite: ASC2320 AVM1940 AVM2450 AVM2510 Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**AVS0090C AVIONICS FUNDAMENTALS (6)**
Content includes but is not limited to troubleshooting, repair and installation of airborne radio communications, radio navigation and radar equipment systems in accordance with regulatory and industry standards. Skills preparation for passing licensing/certification tests required by industry forms an integral part of the curriculum. The course content also includes training in communication, leadership, human relations and employability skills; and safe, efficient work practices. Prerequisite knowledge: Airframe & or Powerplant training, Electronics training, previous experience. Lec Hrs=90 Lab Hrs=90 Oth Hrs=0 Fees=110.00

**AVS0091C AVIONIC INSTALLER (180 HRS) (6)**
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. Prerequisite knowledge: Airframe & or Powerplant training, Electronics training, previous experience. Lec Hrs=90 Lab Hrs=90 Oth Hrs=0 Fees=108.00

**AVS0092C AVIONICS COMMUNICATION SYSTEMS (180 6)**
The purpose of this program is to prepare students for employment as radio mechanics (85514608) and as avionics technicians (823, 281-010). The course content includes, but is not limited to, troubleshooting, repair and installation of 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. Lec Hrs=90 Lab Hrs=90 Oth Hrs=0 Fees=145.00

**AVS0093C NAVIGATION/SUPPORT SYSTEMS ITEMS (1 6)**
The purpose of this program is to prepare students for employment as radio mechanics (85514608) and as avionics technicians (823, 281-010). The course content includes, but is not limited to, troubleshooting, repair and installation of 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. Prerequisite knowledge: Airframe & or Powerplant training, Electronics training, previous experience. Lec Hrs=90 Lab Hrs=90 Oth Hrs=0 Fees=211.00

**BCN1251C BUILDING CONSTRUCTION DRAWING I (4)**
This is the first in a two-course sequence of construction drawing courses. The first half of the semester will include a review of basic drafting techniques. The second half will be devoted to an in-depth study of residential construction working drawings and how they are prepared. AutoCAD will be used extensively as one of the tools for preparing drawings. This course can be used for the AA degree.

**Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=10.00**

**BCN1272 BUILDING CONSTRUCTION PLANS INTERPR (2)**
This course is designed to provide an overview of construction documents and to develop the student's ability to quickly interpret working drawings. Emphasis is on architectural and structural details with limited coverage on mechanical and electrical aspects.

**Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**BCN2253C BUILDING CONSTRUCTION DRAWING II (4)**
This is the second in the two-sequence of building construction drafting courses. The focus of this course will be on the development of advanced drafting techniques while gaining an understanding of more complex construction procedures for commercial buildings. Advanced AutoCAD techniques will be used extensively as one of the tools for preparing drawings. Prerequisite: BCN1251C. This course can be used for the AA degree.

**Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=10.00**

**BCN2560 MECHANICAL AND ELECTRICAL SYSTEMS (3)**
Acquaints student with mechanical and electrical equipment commonly used in high rise and commercial buildings. Presents fundamentals of air conditioning, heating, lighting, communicating and wiring for electrical equipment. Includes a study of specialty equipment such as solar heating.

**Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**BCN2614C CONSTRUCTION ESTIMATING II (3)**
A study of construction contracts, contractor responsibilities, job planning, scheduling, selection of equipment, methods of construction and safety standards. The student is required to make quantity takeoffs from a set of plans to do pricing of labor and materials. Prerequisite: BCT1770

**Lec Hrs=16 Lab Hrs=48 Oth Hrs=0 Fees=10.00**

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

**Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**BCT1743 BUILDING CONSTRUCTION LAW (2)**
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.

**Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**BCT1767 OSHA STANDARDS (1)**
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 OSHA certification.

**Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**BCT1770 CONSTRUCTION ESTIMATING I (2)**
An analysis and determination of building construction costs. Commences with the classification of materials, labor, and subcontracted work into the smallest manageable units. Development of a simple estimate for a residential structure.
BCT2040  MEP PLANS INTERPRETATION (2)
This course is designed to develop the student's ability to quickly interpret working drawings. Emphasis is on the details and specifications of mechanical, electrical, and plumbing plans.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BCT2710  INFRASTRUCTURE COORDINATION (2)
This course provides the student with an overview of the various agencies related to the construction industry. Special emphasis is on the need for and the manner of coordinating with these agencies. Students will receive exposure to the variety of permits, learn to interface with the agencies in order to coordinate the permit process, and understand how this coordinates with the project.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BCT2760  BUILDING CODES AND REGULATIONS (3)
A rigorous review and study of the South Florida Building Code as it applies to structures and safety. For professionals employed as inspectors, architects, engineers and contractors.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BCT2787C  MECHANICAL ELECTRICAL PLUMBING DRAW (3)
The focus of this course will be on the development of advanced drafting techniques while gaining an understanding of more complex construction procedures for commercial and institutional buildings as it relates to mechanical, electrical, and plumbing. Advanced ArchiCAD, AutoCAD &/or MicroStation techniques will be used extensively for preparing drawings.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=10.00

BCT2941L  BUILDING CONSTRUCTION FIELD EXPERIE (1)
This course is designed to provide students with field experiences, including shadowing and job site visits which help the student understand the organizational structure of a variety of construction companies and how the companies function.
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00

BOT2010  GENERAL BOTANY (3)
Course designed to treat entire plant kingdom with emphasis on structure, function, and genetics of flowering plants. Fundamental cell and tissue structure of both vascular and non vascular plants are studied. Associated physiological and chemical effects as related to function are emphasized. Placement by Testing Department or Pre or Corequisite: BOT2010L. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BOT2010L  GENERAL BOTANY LABORATORY (1)
Laboratory experiments and field trips to accompany BOT2010. Upon successful completion of this course, the students should be able to demonstrate knowledge of the plant kingdom through prescribed activities that focus on morphology, taxonomy, anatomy and physiology of selected representative specimens. Dissection exercises included. Pre or Corequisite: BOT2010. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=49.00

BOT2800  PLANTS AND PEOPLE (3)
This course will emphasize the role of plants in the development of civilizations, and the influence of plants on world history, politics, economics and culture. Will survey important plants and plant products from different cultures around the world. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BSC1005  GENERAL BIOLOGY (3)
Course designed to give students an understanding of principles of Biology, while focusing on the nature and activities of living organisms. Course primarily for non-science majors (see BSC1005L). Placement by Testing Department or Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00. This course can be used for the AA degree.

BSC1005L  GENERAL BIOLOGY LABORATORY (1)
Two hours of laboratory weekly which provides hands on activities that develop basic laboratory skills while reinforcing basic concepts in biology. Dissection exercises may be a component of this course. Pre or Corequisite: BSC1005. This course can be used for the AA degree.

**BSC2010 INTRODUCTION TO BIOLOGY I (3)**

This course is the first of a two-semester sequence introducing science majors to biological principles including cell structure, function, communication, reproduction, biochemistry and metabolism, classical and molecular genetics, and genetic engineering. Upon successful completion of this course, the students will be able to explain the methods of science, describe the characteristics of life, describe structure, function, and communication of cells, distinguish mitosis and meiosis, describe cell energetics, photosynthesis and respiration, solve genetics problems, and describe major advances in genetic engineering. Three hours lecture per week. Pre or Corequisite: BSC2010L CHM1040
This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**BSC2010L INTRODUCTION TO BIOLOGY I LABORATOR (1)**

This laboratory course is the first of a two-semester 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. Pre or Corequisite: BSC2010 CHM1040.
This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=71. 00

**BSC2011 INTRODUCTION TO BIOLOGY II (3)**

This course is the second of a two-semester 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. Prerequisite: BSC2010 BSC2010L This course can be used for the AA degree. Pre or Corequisite: BSC2011L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**BSC2011L INTRODUCTION TO BIOLOGY II LABORATO (1)**

This course is the second of a two-semester 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. Prerequisite: BSC2010 BSC2010L This course can be used for the AA degree. Pre or Corequisite: BSC2011
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=75. 00

**BSC2085 HUMAN ANATOMY AND PHYSIOLOGY I (3)**

A survey of the structure, function, and chemistry of the human body considering the following topics: chemistry, body organization, the cell, tissues, membranes, glands, the integumentary system, the skeletal system, the muscular system, the nervous system, and the special senses. 3 hrs. lec. per week. CHM 1032, CHM 1040, or CHM 1045 is very strongly recommended (see your program requirements). Pre or Corequisite: BSC2085L. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**BSC2085L HUMAN ANATOMY AND PHYSIOLOGY I LABO (1)**

A survey of the structure, function, and chemistry of the human body considering the following topics: chemistry, body organization, the cell, tissues, membranes, glands, the integumentary system, the skeletal system, the muscular system, the nervous system, and the special senses. 3 hrs. lec. per week. CHM 1032, CHM 1040, or CHM 1045 is very strongly recommended (see your program requirements). Pre or Corequisite: BSC2085. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=18. 00

**BSC2086 HUMAN ANATOMY AND PHYSIOLOGY II (3)**

A continuation of the Anatomy and Physiology sequence, including the following topics: the circulatory system, the respiratory system, the digestive System, the urinary system, fluid and electrolytes and the reproductive System. CHM 1032, CHM 1040, or CHM 1045 is very strongly recommended (see your program requirements). 3 hrs. lec. Wk. Prerequisite: BSC2085 BSC2085L This course can be used for the AA degree. Pre or Corequisite: BSC2086L
BSC2086L HUMAN ANATOMY AND PHYSIOLOGY II LAB (1)
Laboratory experiments coordinated with BSC1086, including microscope observation, study of anatomical models and dissection. Dissection exercises included. Prerequisite: BSC2085 BSC2085L. This course can be used for the AA degree.

BSC2421 INTRODUCTION TO BIOTECHNOLOGY (3)
This lecture based course provides an introduction to concepts and principles associated with current accepted biotechnological practices in the areas of laboratory safety cell culture techniques, laboratory skills (measurements and calculations, preparation of solutions, use of various instruments) and microscopy. In addition, methods of DNA extraction, amplification, gene cloning, nucleic acids and protein electrophoresis and fingerprinting will be covered. Prerequisite: BSC1005 BSC1005L. This course can be used for the AA degree.

Corequisite: BSC2421L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BSC2910 DIRECTED INDEPENDENT RESEARCH (0)
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. Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00. This course can be used for the AA degree.

BSC2949 CO OP WORK EXPERIENCE (3)
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. This course can be used for the AA degree.

Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BUL2241 BUSINESS LAW I (3)
This course covers basic principles of law and their application to business problems. Topics include a discussion of legal rights and social forces; the legal relationships of government, business and society; law of contracts; personal property, bailments, sales of goods, torts and business crimes. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BUL2242 BUSINESS LAW II (3)
This course provides a study of the legal principles covering negotiable instruments, creditors' rights and secured transactions; agency, employer-employee relations; franchises, insurance, bankruptcy, partnerships, corporations, and real property. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

BUL3130 BUSINESS LAW AND ETHICS (3)
This course explores the nature of legal, ethical and societal environments of business. Emphasis is placed on business's social, legal, political and ethical responsibilities to both external and internal groups for business. Topics include corporate social responsibility, legal, political, and ethical aspects of business, state and federal laws, contracts, intellectual property, employment law, product liability, safety issues and environmental regulation.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CCJ1020 INTRODUCTION TO CRIMINAL JUSTICE (3)
Introduction to the historical and philosophical background of the agencies of the Criminal Justice System. An examination of the relationships between the police, courts and correctional systems. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CCJ2191 HUMAN BEHAVIOR IN CRIMINAL JUSTICE (3)
A consideration of human behavior and how it relates to the duties and responsibilities of the criminal justice practitioner. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CCJ2933 CORRECTIONS PRACTICUM (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CCJ2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Student will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. This course can be used for the AA degree.

Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CDA4411 SYSTEMS INTEGRATION AND ARCHITECTURE (3)
This course provides the student with a detailed understanding of computer hardware and system software. The material covered in this course is intended to establish a platform of technical knowledge for systems analysis, design, configuration, procurement, and management.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CEN4341 PLATFORM TECHNOLOGIES (3)
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. Prerequisite: CNT3504 CNT3604

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CEN4722 HUMAN COMPUTER INTERACTION (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CET1114C DIGITAL TECHNIQUES (4)
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.

This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=2.00

CET1117C MICROPROCESSORS I (3)
The 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. Prerequisite: instructor approval or Prerequisite: CET1114C

This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=5.00

CET1461C TECHNICAL COMPUTER APPLICATIONS (3)
Technical computer applications, including the use of the Windows operating system, computer applications such as word processing, spreadsheets, presentation graphics, an introduction to CAD (Computer-Aided Design) and electronic simulation software is presented with emphasis on the solution of problems in the Engineering Technology fields. This course is geared towards the Engineering Technology student. Prerequisite: EET1015C MTB1325
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=5.00

CET1600C CISCO NETWORKING I (4)
This course introduces the architecture, structure, functions, components, and models of the Internet and computer networks. It uses the OSI and TCP layered models to examine the nature and roles of protocol and services at the application, network, data link, and physical layers. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Labs use a 'model internet' to allow students to analyze real data without affecting production networks. Packet tracer (PT) activities help students analyze protocol and network operation and build small networks in a simulated environment. At the end of the course, students build simple LAN topologies by applying basic principles of cabling, performing basic configurations of network devices such as routers and switches, and implementing IP addressing schemes. Prerequisite: CTS1133C CTS2131C

Pre or Corequisite: CET1630C
Lec Hrs=56 Lab Hrs=8 Oth Hrs=0 Fees=191.00

CET1610C CISCO NETWORKING II (4)
This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. By the end of this course, students will be able to recognize and correct common routing issues and problems. Students complete a basic procedural lab, followed by basic configuration, implementation, and troubleshooting labs in each chapter. Packet Tracer (PT) activities reinforce new concepts, and allow students to model and analyze routing processes that may be difficult to visualize or understand. Prerequisite: CET1600C
Lec Hrs=56 Lab Hrs=8 Oth Hrs=0 Fees=191.00

CET1615C CISCO NETWORKING III (4)
This course provides comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model and how to select devices for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual LANs, VTP, and Inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented, and students develop the knowledge and skills necessary to implement a WLAN in a small-to-medium network. Prerequisite: CET1610C
Lec Hrs=56 Lab Hrs=8 Oth Hrs=0 Fees=191.00

CET1620C CISCO NETWORKING IV (4)
This course discusses the WAN technologies and network services required by converged applications in Enterprise networks. The course uses the Cisco Network Architecture to introduce integrated network services and explains how to select the appropriate devices and technologies to meet network requirements. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principles of traffic, access control, and addressing services. Finally, students learn how to detect, troubleshoot, and correct common enterprise network implementation issues. Prerequisite: CET1615C
CET1630C NETWORK CABLING TECHNOLOGIES (4)
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

CET2123C MICROPROCESSORS II (4)
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. Prerequisite: CET1114C CET1117C

CET2486C NETWORKING TECHNOLOGY (2)
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.

CET2625C CISCO CCNP I (4)
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. Prerequisite: CET1620C

CET2627C CISCO CCNP II-SWITCHING (4)
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. Prerequisite: CET2625C

CET2628C CISCO CCNP III (4)
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. Prerequisite: CET2625C CET2627C

CET2660C CISCO CCNA SECURITY (4)
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. Prerequisite: CET1620C

CET2742C ADVANCED NETWORKING (3)
This course is for support professionals who are new to networking services and will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses various networking services. It also provides students with the prerequisite knowledge and skills required for implementing and Administering Directory Services such as Microsoft Active Directory. Prerequisite: CET2486C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=7.00

CGS1060C COMPUTER AND INTERNET LITERACY (3)
This is an introductory course in basic computer and internet use. It covers computer hardware and software fundamentals (including the use of Windows), key productivity applications (including word processing, spreadsheets, and presentation systems), and living in an online world (including network fundamentals, e-mails, and the effective use of the Internet as a communication tool and information resource). Students will develop basic computer skills to aid them with college studies and workforce readiness. Hands-on use of a personal computer is required. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=16 Oth Hrs=0 Fees=47.00

CGS1510C ELECTRONIC SPREADSHEET (3)
This course provides hands-on applications with a spreadsheet software package. Through Lecture and Lab practices, students will develop skills that create, manipulate and utilize spreadsheets. This course can be used for the AA degree.
Lec Hrs=24 Lab Hrs=24 Oth Hrs=0 Fees=58.00

CGS1540C DATABASE MANAGEMENT (3)
This course is an introduction to database management. Using appropriate database software, students will learn to maintain and manipulate data in an organized, accessible and accurate manner. Emphasis is placed on the use of microcomputer database management software for common business applications. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=51.00

CGS1557C INTERNET SITE DESIGN (3)
This course is intended to provide technical, programming and administrative background and experience for a career with the World-Wide Web. Students should have a working familiarity with the Internet and the World-Wide Web, such as could be gained in CGS1555C, Introduction to the Internet.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=16.00

CGS2100C COMPUTER APPLICATIONS (3)
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. Prerequisite: CGS1060C
This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=16 Oth Hrs=0 Fees=60.00

CGS2554C WEB DEVELOPMENT 3 (3)
This course teaches development of E-Commerce web sites for back-end server applications. It stresses development of database information and manipulation for web delivery. Students should have complete knowledge of HTML and database management, before taking this course. Students will conceptualize and develop E-Commerce web sites.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=5.00

CGS2874C MULTIMEDIA AUTHORIZATION II (3)
Continuation of multimedia CGS2871C with emphasis on functions and variables and development of complex interactive titles for cross platform delivery. Custom variables will be created. In-depth projects will be developed using video, audio, text, and graphics while controlling the program direction, testing, and debugging. Hypertext and development of on-line help modules and documentation will be included in the projects. Prerequisite: DIG2500C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

CHD1320 CURRICULUM PLANNING FOR EARLY CHILD (3)
Content and methods of planning developmentally appropriate activities to enhance children's cognitive, social, emotional, physical and creative development. Lesson plan formats and daily scheduling will be covered. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CHD1331 CREATIVITY FOR YOUNG CHILDREN (3)**
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CHD1333 CHILDREN'S LITERATURE & LANGUAGE ART (3)**
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. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CHD1338 MATH & SCIENCE FOR THE YOUNG CHILD (3)**
Designed to foster understanding of the development of mathematical thinking and the mental ability of the preschool child. The science portion will enable the pupil to become familiar with the concept and techniques of "sciencing."

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CHD1940 PRACTICUM I: OBSERVATION AND EVALU (3)**
Offers an opportunity to observe children in child care settings, gain understanding of their behavior and evaluate their environments.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

**CHD2441 PRACTICUM II (3)**
Facilitates practical experiences in techniques of early childhood education. Requires qualified supervision in a school or center for preschool education.

Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=0.00

**CHD2800 ADMIN AND MGMT IN E C EDUCATION (3)**
This course will emphasize the design and operation of a childcare facility. Classroom exposure will emphasize and assess site selection, building design and supervisory functions, equipment selection, activity planning, scheduling, financing, budgeting, record-keeping, and marketing.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CHM1025 INTRODUCTION TO CHEMISTRY (3)**
Selected topics from general chemistry. Topics covered include chemical measurements, atomic structure, periodic table, chemical bonding, inorganic compound nomenclature and formula writing, stoichiometry, gases, liquids, solids, solutions, acid-base chemistry, oxidation-reduction chemistry, energy, and nuclear chemistry. Prerequisite: MAT0028. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CHM1025L INTRODUCTION TO CHEMISTRY LABORATORY (1)**
Laboratory experiments to accompany CHM1025. Prerequisite: MAT0028 REA0017C.

This course can be used for the AA degree.

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=18.00

**CHM1032 CHEMISTRY FOR HEALTH SCIENCES (3)**
Selected topics from general chemistry, organic chemistry and biochemistry. This course is designed specifically for Nursing and other Allied Health Technology students.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CHM1032L CHEMISTRY FOR HEALTH SCIENCES LAB (1)**
Laboratory exercises to accompany CHM1032.

Pre or Corequisite: CHM1032.

This course can be used for the AA degree.

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=18.00

**CHM1040 GENERAL CHEMISTRY A (EXPANDED SEQU (3)**
This is the first course in a three semester sequence, CHM1040, CHM1041 and CHM1046. This sequence includes two laboratories:
CHM1045L to be taken concurrently with CHM-1041 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. Pre or Corequisite: MAT1033. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CHM1041 GENERAL CHEMISTRY B (EXPANDED SEQU (3)
This is the second course in a three semester sequence which includes: CHM 1040, CHM 1041 and CHM 1046. This sequence also includes two laboratories: (1) CHM 1045L to be taken concurrently with CHM 1041 and (2) CHM 1046L to be taken with CHM 1046. Topics covered include: gases, liquids, solids, solutions acid-base chemistry and ionic reactions, thermodynamics and some descriptive chemistry of non-metals. Prerequisite: CHM1040
This course can be used for the AA degree. Pre or Corequisite: CHM1045L MAC1105
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CHM1045 GENERAL CHEMISTRY 1 (3)
This is the first course in a two semester sequence, CHM 1045 and CHM 1046. This sequence includes two laboratories: CHM 1045L to be taken concurrently with CHM 1045 and CHM 1046L to be taken with CHM 1046. This sequence is for students who have already had high school chemistry. Topics covered include: chemical measurements, stoichiometry, atomic structure periodic table, chemical bonding, inorganic compounds, nomenclature, formula writing, gases, liquids, solids, solutions acid-base chemistry and ionic reactions and some descriptive chemistry of non-metals. To enroll, it is strongly recommended that students have had previous chemistry at the high school or college level. If a student has not had prior experience in a chemistry course the CHM 1040/CHM 1041/CHM 1046 sequence is highly recommended. Prerequisite: MAC1105. This course can be used for the AA degree. Pre or Corequisite: CHM1045L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CHM1045L GENERAL CHEMISTRY I LAB (1)
Laboratory experiments to accompany CHM1041 or CHM1045. Placement by Testing Department or Pre or Corequisite: CHM1045. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=18. 00

CHM1046 GENERAL CHEMISTRY II (3)
This is the final course of the two-semester general chemistry sequence: CHM 1045 and CHM 1046; and the final course of the three-semester general chemistry sequence: CHM 1040, CHM 1041, and CHM 1046. These sequences include two laboratories: (1)CHM 1045L to be taken concurrently with CHM 1041 or CHM 1045, and (2)CHM 1046L to be taken with CHM 1046. Topics covered include thermodynamics, kinetics, equilibrium, electrochemistry, coordination chemistry, descriptive chemistry of metals, nuclear chemistry and an introduction to organic chemistry. Prerequisite: CHM1045 CHM1045L
This course can be used for the AA degree. Pre or Corequisite: CHM1046L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CHM1046L GENERAL CHEMISTRY II LAB (1)
Laboratory experiments to accompany CHM1046E or CHM-1046. 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 CHM-1046 or CHM-1046E, to collect data accurately and to use those data to calculate a reasonable answer or come to a logical conclusion. Prerequisite: CHM1045 CHM1045L
This course can be used for the AA degree. Pre or Corequisite: CHM1046
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=33. 00

CHM2210 ORGANIC CHEMISTRY I (3)
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. Prerequisite: CHM1046 CHM1046L
This course can be used for the AA degree. Pre or Corequisite: CHM2210L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CHM2210L ORGANIC CHEMISTRY I LABORATORY (1)
Organic laboratory experiments and preparations to accompany CHM2210. Special fee charged.
Prerequisite: CHM1046 CHM1046L
This course can be used for the AA degree.
Pre or Corequisite: CHM2210
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=100. 00

CHM2211 ORGANIC CHEMISTRY II (3)
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. Prerequisite: CHM2210 CHM2210L
This course can be used for the AA degree.
Pre or Corequisite: CHM2211L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CHM2211L ORGANIC CHEMISTRY II LABORATORY (1)
Appropriate experiments and preparation to compliment CHM2211. Special fee charged.
Prerequisite: CHM2210 CHM2210L. This course can be used for the AA degree.
Pre or Corequisite: CHM2211
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=100. 00

CHM3203 ORGANIC & BIOCHEMISTRY (3)
This course is a one semester course which 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. Corequisite: CHM3203L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CHM3203L ORGANIC & BIOCHEMISTRY LAB (1)
This course has a weekly 3-hour session with laboratory experiments to accompany the lectures in CHM3205 Survey of Organic Chemistry and Biochemistry. This is a content laboratory course in the B. S. Degree in the BC Science Education Program. The course has been designed to enhance the understanding of organic and biochemical concepts essential to the K-12 classroom. This program has been designed to correlate chemistry concepts with the NSTA National Science Content Standards, the Florida Subject Matter Content Standards, and the Florida Sunshine State Science Standards. Corequisite: CHM3203
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=40. 00

CIS1000C INTRODUCTION TO COMPUTER SCIENCE (3)
This course is designed to provide students with a broad perspective of the field of Computer Science, from core issues and concepts inherit 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. Prerequisite: CGS1060C
This course can be used for the AA degree.
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=60. 00

CIS1513C PROJECT MANAGEMENT (3)
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. Prerequisite: CGS1060C or placement. Prerequisite: CGS1060C
This course can be used for the AA degree.
CIS232IC SYSTEMS ANALYSIS AND DESIGN (3)
This course introduces the process and methodology for system analysis and design. Students will be able to learn the process of system development, the traditional structural approach for system analysis and design, use of modeling tools, adherence to methodological life cycle and project management standards system development strategy and new trends of system development. Through class discussion, hands-on assignments and a team project, students will learn how to translate business requirement into information systems. Prerequisite: CIS1000C COP1334C. This course can be used for the AA degree.
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=60.00

CIS2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Student will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CIS3510 PROJECT MANAGEMENT (3)
This course covers the general aspects of project management and emphasizes the important special considerations which apply to technology projects. Supporting software is used extensively. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CIS4253 SOCIAL AND PROFESSIONAL ISSUES IN I (3)
In addition to technical skills, an IT professional must understand the social and professional context of IT and computing, and adhere to ethical codes of conduct. This knowledge area covers the historical, social, professional, ethical and legal aspects of computing. It identifies how teamwork is integrated throughout IT and how IT supports an organization. It also stresses professional oral and written communication skills.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CIS4361 INFORMATION ASSURANCE AND SECURITY (3)
The information technology (IT) professional must understand, apply, and manage information assurance and security (IAS) in computing, communication, and organizational systems. It is also important for the IT professional to provide users with a framework to be sufficiently security aware to be an asset to the organization rather than a liability. IAS includes operational issues, policies and procedures, attacks and defense mechanisms, risk analyses, recovery, and information security. It should also be noted that many of the essential educational activities in this knowledge area may be illegal if performed outside a controlled environment, or without proper authorization. It is the responsibility of each individual program to appropriately administer these activities. Prerequisite: CNT3504
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CIS4596 IT CAPSTONE PROJECT (3)
This course will give the IT student the ability to utilize what he/she has learned from the IT Program and adapt it to a work environment. This will be accomplished by providing the student a senior project that includes first: project proposal, feasibility studies, identification of intellectual property, and a teamwork environment for projects 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 or Pre or Corequisite: CDA4411 CEN4341 CEN4722 CIS3510 CIS4253 CIS4361 CNT3604 COP3703 COP3847 COP4858 Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJC2000 INTRODUCTION TO CORRECTIONS (3)
Introduction to the historical events and social issues that have shaped the corrections (prison/jail) system in the U. S. , and an examination of contemporary corrections in
terms of structure, clients, management, staff, programs and prisoners' rights. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2162 PROBATION AND PAROLE PROCEDURES (3)
Examines this important community-based treatment aspect of the corrections system, reviews philosophy and development, the present-sentence investigation, and supervision methods. Juvenile practices are also included. 3 hrs. lec. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJD0573 RESPONDING TO VETERANS (0)
This 16 hour course will provide criminal justice officers with an understanding of unique issues when dealing with veterans, active duty military personnel, or reserve members and to develop enhanced skills for de-escalating potentially volatile situations, and working toward a successful resolution.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=8. 00

CJE1300 INTRO TO CRIMINAL JUSTICE ADMINISTR (3)
Introduction to principles of administration and managerial concepts characteristic of criminal justice organizations. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2170 COMPARATIVE WORLD POLICE AGENCIES (3)
A survey of contemporary foreign law enforcement and criminal justice systems. Includes the operational and philosophical differences emerging from various cultural and legal systems. This course will include case and group studies of selected countries. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2400 POLICE COMMUNITY RELATIONS (3)
A consideration of the significance of establishing good working relationships between the police and the public, including the complex factors that lead to successful police community relations. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2580 INTERVIEWS AND INTERROGATIONS (3)
This course is designed to cover the techniques, methods, principles and issues of interviews and interrogations for criminal justice officers and investigators. Course offered through Deception Control, Inc., Ft. Lauderdale.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2600 CRIMINAL INVESTIGATION (3)
The investigation activity of a police department is studied to evaluate its organization, function and relationship with other divisions and agencies. Emphasis is placed on the procedural aspects and methodology employed in the investigative process. The student will know the elements of preliminary and follow-up investigations, to include methods of crime scene search, collection and preservation of evidence, and chain of custody concepts. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2640 INTRODUCTION TO CRIMINALISTICS (3)
An introduction to the scientific aspects of investigation known as criminalistics, with emphasis on crime scene techniques, the collection and preservation of evidence and the examination of evidence. Students will be familiarized with the capabilities and limitations of a police laboratory. Special fee charged. 1 hr. Lec. 2 hrs. Lab. This course can be used for the AA degree.
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=20. 00

CJE2642 CRIMINALISTICS PRACTICUM (3)
The knowledge and skills developed in the prerequisites are coordinated in practical exercises which will develop expertise in the complete processing of crime scenes. Special fee charged. 1 hr. lec. 2 hrs. lab. Prerequisite: CJE2600 CJE2640 CJE2770
Lec Hrs=32 Lab Hrs=16 Oth Hrs=0 Fees=44. 00

CJE2643 ADVANCED FORENSIC INVESTIGATION (3)
This course explores the scientific and investigative methods used to solve serious
crimes against persons. Topics include distinguishing between causes of death, such as accidental, suicide or homicide; the use of autopsies; child and elderly abuse investigation. (NOTE: this course utilizes graphic material that may make some students uncomfortable. ) Instructor's approval or Prerequisite: CJE2600
CJE2640
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2722 POLYGRAPH THEORY AND OPERATIONS (3)
Includes the history and development of the polygraph with further emphasis on mechanics of instrument operation, maintenance and calibration. Course offered through Deception Control, Inc. Ft. Lauderdale.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2723 TEST QUSTN CONSTR & SEMANTICS/PERSO (3)
The construction of test questions appropriate to the personnel aspect of the polygraph is emphasized. Course offered through Deception Control, Inc., Ft. Lauderdale.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2724 TEST QUSTN CONSTR & SEMANTICS/CRIMI (3)
The construction of test questions appropriate to the criminal case aspect of the polygraph is emphasized. Course offered through Deception Control, Inc., Ft. Lauderdale.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2725 CHART ANALYSIS, VALIDITY AND RELIAB (4)
Validity and reliability of the polygraph is examined, along with an in-depth consideration of chart analysis. Course offered through Deception Control, Inc., Ft. Lauderdale.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2726 POLYGRAPH OPERATIONS PRACTICUM (3)
Types of polygraph techniques and examinations are considered with emphasis on conducting examinations in role playing situations in the laboratory. Course offered through Deception Control, Inc., Fort Lauderdale.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJE2770 FORENSIC PHOTOGRAPHY AND VISUAL DOC (3)
The student is taught specific skills necessary to visually document and photographically preserve crime scenes and evidence, from both technical and legal standpoints.
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=4. 00

CJJ2001 JUVENILE JUSTICE (3)
An analysis of the criminal justice system as it relates to juveniles. Major topics include: police practices (such as detention, searches and interrogation) when dealing with juveniles, court procedure in juvenile cases and different theories of juvenile rehabilitation. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJK0007 INTRODUCTION TO LAW ENFORCEMENT (0)
This course is designed to provide an overview of academy requirements, the criminal justice system, the values and ethics required for criminal justice officers, and the consequences of sexual harassment.
Lec Hrs=11 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJK0008 LEGAL (2)
This course is designed to provide students a foundation in the aspects of law relevant to the duties of criminal justice officers.
Lec Hrs=69 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJK0011 HUMAN ISSUES (1)
This course is designed to familiarize the student with the human issues encountered by the law enforcement officer. These issues include, but are not limited to substance abuse, mental illness, physical and developmental disabilities.
Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJK0017 COMMUNICATIONS (2)
This course is designed to provide students the communication skills relevant to the duties of criminal justice officers.
Lec Hrs=76 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

CJK0020 VEHICLE OPERATIONS (1)
This course presents the dynamics of emergency vehicle operations and develops skills in operating a motor vehicle in the law enforcement
CJK0031 FIRST AID FOR CRIMINAL JUSTICE OFFICER (1)
This course provides life-saving skills development in emergency medical situations appropriate for the law enforcement officer, including: CPR and communicable diseases.
Lec Hrs=24 Lab Hrs=24 Oth Hrs=0 Fees=0.00

CJK0040 FIREARMS (2)
This course develops proficiency with the semi-auto pistol used by a law enforcement officer. Qualification is required at various lighting levels.
Lec Hrs=4 Lab Hrs=76 Oth Hrs=0 Fees=0.00

CJK0051 CMS CRIMINAL JUSTICE DEFENSIVE TACTICS (2)
This course is designed to provide the student defensive skills appropriate for the threat level, within Florida law. Demonstration of proficiency is required.
Lec Hrs=80 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0061 PATROL I (1)
This course is designed to familiarize the student with the law enforcement officer's duties while on patrol: Community Oriented Policing, patrol and problem solving techniques, officer safety, arrest, custody and other related patrol functions.
Lec Hrs=58 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0062 PATROL 2 (1)
This course is designed to provide the student knowledge of procedures necessary to address various high risk situations, to include: incident command system, crowd control, gangs and extremist groups, hazardous materials, bombs and explosives.
Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0071 CRIMINAL INVESTIGATIONS (1)
This course is designed to familiarize the student with the general process and procedures related to criminal investigations.
Lec Hrs=56 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0076 CRIME SCENE INVESTIGATIONS (0)
This course is designed to familiarize the student with the general process and procedure for responding to and processing a crime scene.
Lec Hrs=24 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0082 TRAFFIC STOPS (0)
Course is based on the current curriculum, as developed and approved by the Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission. This course is designed to familiarize the student with the procedures and safety issues related to traffic stops.
Lec Hrs=24 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0083 D. U. I. TRAFFIC STOPS (0)
Course is based on the current curriculum, as developed and approved by the Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission. This course is designed to familiarize the student with driving under the influence (DUI) and traffic stops.
Lec Hrs=24 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0086 TRAFFIC CRASH INVESTIGATIONS (1)
To introduce the student to traffic crash investigations, laws pertaining to traffic crashes and procedures for responding to a traffic crash.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0096 CRIMINAL JUSTICE OFFICER PHYSICAL FITNESS (2)
This course is designed to introduce the student to physical conditioning, aerobic capacity, and wellness conditioning and training.
Lec Hrs=60 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0100 INTERPERSONAL SKILLS 1 (0)
Course is based on the current curriculum, as developed and approved by the Florida Department of Law Enforcement, Criminal Justice Standards and Training commission. This course is designed to familiarize the student with human behavior, human interaction, and physically handicapped persons.
Lec Hrs=62 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CJK0101 INTERPERSONAL SKILLS 2 (0)
Course is based on the current curriculum, as developed and approved by the Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission. This course is designed to familiarize the student with human behavior, human interaction, and physically handicapped persons.
Lec Hrs=62 Lab Hrs=0 Oth Hrs=0 Fees=0.00
Department of Law Enforcement, Criminal Justice Standards and Training Commission. This course is designed to familiarize the student with human adjustment to imprisonment, interpersonal skills, supervision techniques, preventing sexual assault.

Lec Hrs=50 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CJK0102 CORRECTIONAL OPERATION (0)**

Course is based on the current curriculum, as developed and approved by the Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission. This course is designed to familiarize the student with how an officer needs to possess those basic skills to perform the physical tasks required of Correctional Officers.

Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CJK0212 CROSS-OVER CORRECTIONS TO LAW ENFOR (0)**

This course is designed to provide transitioning officers the firearms training (night-firing) required for the new discipline not previously completed by the officer. Qualification with the weapon is required. In addition, this course is mandated by the Florida Criminal Justice Standards and Training Commission for inclusion in the Crossover from Correctional Officer to Law Enforcement Officer training program effective May 11, 2005. This is a limited access course. It requires active certification and employment as a State of Florida correctional officer.

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=0.00

**CJK0213 CROSS-OVER CORRECTIONS TO LAW ENFOR (1)**

This course is designed to provide transitioning officers the tactical applications training required for the new discipline not previously completed by the officer. This course explores the knowledge and procedures necessary for an officer engaging in various activities, to include: court process, incident command system, bombs and explosives, and crowd control. In addition, this course is mandated by the Florida Criminal Justice Standards and Training Commission for inclusion in the Crossover from Correctional Officer to Law Enforcement Officer training program effective May 11, 2005. This is a limited access course. It requires active certification and employment as a State of Florida correctional officer.

Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CJK0221 CORRECTIONAL X-OVER TO LAW ENFORCE (0)**

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

Lec Hrs=47 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CJK0222 CORRECTIONAL X-OVER TO LAW ENFORC (0)**

This course is designed to provide transitioning officers specific communication skills required for the new discipline (and not previously completed by the officer).

Lec Hrs=56 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CJK0223 CORRECTIONAL X-OVER TO LAW ENFORC (0)**

This course is designed to provide transitioning officers specific skills related to human issues required for the new discipline (and not previously completed by the officer). These issues include, but are not limited to, crisis intervention, disability awareness, and responding to juveniles.

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CJK0240 LAW ENFORCEMENT AUXILIARY INTRODUCT (0)**

Course covers requirements for completing the basic recruit training program, ethics, values, and professionalism in both personal and professional lives. Also covered in this course is the criminal justice system and its functions.

Lec Hrs=27 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**CJK0241 LAW ENFORCEMENT AUXILIARY PATROL AN (0)**
This course covers officer survival, patrol techniques, contact, arrest, and transporting prisoners, crowd control, incident command and traffic direction, stops and crash investigations. 

**Lec Hrs=19 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0242 LAW ENFORCEMENT AUXILIARY INVESTIGA (0)**
Course covers the patrol officer's responsibilities in crime scene investigations and criminal investigations to include all types of crimes against both persons and property. 

**Lec Hrs=17 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

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

**Lec Hrs=88 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0275 CORRECTIONAL PROBATION INVESTIGATIO (1)**
This course presents the techniques needed for a Correctional Probation Officer to conduct and document successful investigations. 

**Lec Hrs=39 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

This course introduces firearms, presents the nomenclature and safety rules, and familiarizes the student with good shooting habits. 

**Lec Hrs=2 Lab Hrs=14 Oth Hrs=0 Fees=0.00**

**CJK0276 CORRECTIONAL PROBATION MANAGEMENT I (0)**
This course presents the fundamentals of the electronic information systems a Correctional Probation Officer must access. 

**Lec Hrs=27 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0270 CRIMINAL JUSTICE LEGAL 1 (0)**
This course is designed to provide students a foundation in the aspects of law relevant to the duties of Correction officers. 

**Lec Hrs=46 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0280 CRIMINAL JUSTICE OFFICER PHYSICAL F (0)**
This course is designed to introduce the student to physical conditioning, aerobic capacity, and wellness conditioning and training. It will help the student to better understand the need for a police officer to maintain physical conditioning and how an officer needs to possess those basic skills to perform the physical tasks required of criminal justice officers. 

**Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0271 CORRECTIONAL PROBATION LEGAL (1)**
This course presents the structure and components of the Florida criminal justice System and the laws governing the duties of a Correctional Probation. 

**Lec Hrs=57 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0281 CRIMINAL JUSTICE OFFICER PHYS FIT T (1)**
This course is designed to introduce the student to physical conditioning, aerobic capacity, and wellness conditioning and training. It will help the student to better understand the need for a criminal justice officer to maintain physical conditioning. 

**Lec Hrs=2 Lab Hrs=32 Oth Hrs=0 Fees=0.00**

**CJK0272 CORRECTIONAL PROBATIONAL INTERPERSO (1)**
This course presents the topics of interpersonal skills, verbal and written communication, officer survival, conflict resolution, crisis intervention and suicide prevention/intervention. Emphasis is on communications. 

**Lec Hrs=44 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0285 CRIMINAL JUSTICE LEGAL 2 (0)**
The student will know the basic provisions of the U. S. Constitution and comprehend the officer's responsibility to defend and comply with the U. S. Constitution. 

**Lec Hrs=22 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0273 CORRECTIONAL PROBATION CASELOAD MAN (1)**
This course presents the caseload management procedures for Correctional Probation Officers. 

**Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**CJK0286 CRIMINAL JUSTICE COMMUNICATIONS (0)**

**CJK0274 CORRECTIONAL PROBATION SUPERVISION (2)**
The student will know the definition of note taking and the uses of notes. The student will comprehend the kinds of information to be collected and the procedures to follow in taking notes. The student will demonstrate note taking techniques in practical situations.

**Lec Hrs=42 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**

**CJK0422 DART-FIRING STUN-GUN (0)**

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

**Lec Hrs=8 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**

**CJK0441C POLICE SERVICE AIDE (3)**

This course (with specified corequisites) is designed to provide students the minimum skills necessary to perform the duties of a Police Service Aide (PSA) and is approved by the Criminal Justice Standards and Training Commission as prescribed by Florida State Statute 316. 640 . Corequisite: CJK0442 CJK0451

**Lec Hrs=94 Lab Hrs=16 Oth Hrs=0 Fees=0. 00**

**CJK0442 TRAFFIC ACCIDENT / CRASH INVESTIGAT (2)**

This course is designed to provide students the minimum skills necessary to perform the duties of a Parking Enforcement Specialist (PES) and is approved by the Criminal Justice Standards and Training Commission as prescribed by Florida State Statute 316. 640 .

**Lec Hrs=68 Lab Hrs=12 Oth Hrs=0 Fees=0. 00**

**CJK0451 PARKING ENFORCEMENT SPECIALIST (0)**

This course is designed to provide students the minimum skills necessary to perform the duties of a Parking Enforcement Specialist (PES) and is approved by the Criminal Justice Standards and Training Commission as prescribed by Florida State Statute 316. 640 .

**Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**

**CJK0480 EMERGENCY PREPAREDNESS (0)**

Course is based on the current curriculum, as developed and approved by the Florida Department of Law Enforcement, Criminal Justice Standards and Training commission. This course is designed to familiarize the student with techniques and procedures for handling unusual occurrences and incidents.

**Lec Hrs=26 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**

**CJK1062 CONSTITUTIONAL LAW (3)**

An examination of the U. S. Constitution, its amendments and its impact on present day criminal justice practitioners. 3 hrs. Lec. This course can be used for the AA degree.

**Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**

**CJK1100 CRIMINAL LAW (3)**

Course will be concerned with the sources and elements of criminal law. Emphasis will be placed on criminal law as related to law enforcement officers with particular attention given to the rights and responsibilities of officers in enforcing various criminal laws. 3 hrs. lec. This course can be used for the AA degree.

**Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**

**CJK1130 CRIMINAL EVIDENCE AND COURT PROCEDU (3)**

An examination of the rules governing admissibility of evidence, specifically as they affect the law enforcement officer in the processes of arrest, use of force, search and seizure, presentation and custody of evidence, testimony and court procedure. This course can be used for the AA degree.

**Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**

**CJK1140 CORRECTIONAL LAW (3)**

A course in practical law for correctional personnel. Study includes law regulating use of force, civil rights of prisoners, constitutional law, legal service, disciplinary procedures, parole and current case law.

**Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**

**CJK2060 CIVIL RIGHTS (3)**

A survey course of the Federal Rights legislation to include the 13th through 15th Amendments of the Reconstruction Era and the Civil Rights legislation of the 60's. Special topics include consideration of the American Disabilities Act, Age Discrimination in Employment Act, Equal Employment Opportunities Act, Equal Pay Act, Affirmative Action, and Sexual Harassment. This course can be used for the AA degree.

**Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00**
CNT2001 LOCAL AREA NETWORKING (3)
This course is designed as a comprehensive study of microcomputer networking. Topics include the selection, installation, maintenance, and management of network software and hardware.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CNT3504 NETWORKING (3)
This course teaches the concepts necessary to design, deploy, integrate and administer a communications infrastructure. This course includes data communication concepts that cover telecommunications, the Internet and Internet working principles.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CNT3604 SYSTEM ADMINISTRATION AND MAINTENANCE (3)
This course will provide the IT professional with the knowledge and the management tools that are needed to design, select, apply, and deploy computer systems. The learned outcomes will allow the student an understanding in system administration concepts that will cover software, hardware, system types, databases, communications documentation, internet, and maintenance.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CNT3702 INFRASTRUCTURE AND FACILITIES PLANNING (3)
Students integrate computer and networking hardware and software into a robust, secure, redundant and resilient infrastructure. Students will research and present findings related to enterprise projects in computer networking design. In addition to the technical requirements the student will learn the business principles of economies of scale, service level agreements, request for proposals, and outsourcing.
Prerequisite: CNT3504
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

COP1000C INTRODUCTION TO COMPUTER PROGRAMMING (3)
This course provides the beginning programming student with the techniques necessary to write well-documented, structured computer programs. The course is intended to emphasize the planning process using examples involving sequence, selection, and iteration. The course is designed to promote good programming practices for further study of other programming languages.
Prerequisite: MAT0028
This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=48.00

COP1334C INTRODUCTION TO C++ (3)
This course provides an introduction to computer program design and development using the C++ language. A structured, multi-phase, program development process featuring a series of steps involving problem definition, top-down design, and formal program specification is stressed. The course is intended to provide the novice programming student with the techniques needed to develop well-documented, structured computer programs. Students who do not possess computer programming experience are strongly encouraged to complete COP1000C (Introduction to Computer Programming) before attempting this course.
Prerequisite: MAT1033. This course can be used for the AA degree.
Pre or Corequisite: CIS1000C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=45.00

COP1335C INTERMEDIATE C++ PROGRAMMING (3)
This course continues the study of structured programming and the C++ language begun in COP1334C. Topics will include classes, polymorphism, inheritance, streams, templates, exception handling dynamic memory allocation, and memory management. An introduction to data abstraction and data structures is also included.
Prerequisite: CIS1000C COP1334C.
This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=54.00

COP1661C INTRODUCTION TO PROGRAMMING WITH AN (3)
This course introduces the student to programming using Android application development as the context. No prior programming experience is needed. Students will gain experience with basic control and data structures, object-oriented programming, XML, GUIs, and event-driven programming, through interesting real-life uses of the Android API. By
the end of the course, students will have a firm grasp of introductory level programming along with a good grounding in Android application development. NOTE: Students are *not* required to own an Android device. The course may be completed using the simulator provided in the Android Development Kit. Basic computer literacy; file management; use of Internet; installing programs required to be successful in this course.

Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0. 00

**COP2071C DATABASE DESIGN AND PROGRAMMING USI (3)**
This course provides the student with a solid foundation in Relational Database Management Systems and RDBMS technology. It emphasizes an end-to-end solution, beginning with requirements and progressing through conceptual design, logical database design, physical database design, and implementation, using a RDBMS and the SQL language. It involves extensive database manipulation and querying using SQL. It also stresses transaction management concepts, data integrity constraints, and performance issues. Prerequisite: CIS1000C COP1334C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=60. 00

**COP2171C VISUAL BASIC PROGRAMMING (3)**
This course teaches how to create Visual Basic based programs. Students write programs that access databases, use OLE to integrate applications, and act as an OLE Server and as an add-in. This class assumes a working knowledge of Basic Programming (COP1170). Prerequisite: COP1334C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=54. 00

**COP2360C C# PROGRAMMING (3)**
This course teaches students how to create C# programs and gives the student a solid foundation on building applications using an object-oriented /event-driven language. Students will write programs using C# controls and their main properties, methods and events. Students will also write programs that access sequential access files and will learn basic programming structures and manipulation of arrays in C#. The class assumes a working knowledge of basic programming control structures. Prerequisite: CIS2321C COP1335C Pre or Corequisite: COP2361C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=54. 00

**COP2361C OBJECT-ORIENTED ANALYSIS AND DESIGN (3)**
This course focuses on the object-oriented software development process, including object-oriented methodologies and workflows. Students will be able to determine the Use Cases and Domain Model of the problem domain. Create a system design supporting functional requirements. Create a system architecture supporting the nonfunctional requirements and development constraints. Prerequisite: CIS2321C COP1335C. This course can be used for the AA degree.
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=54. 00

**COP2800C PROGRAMMING IN JAVA (3)**
This course introduces students to the JAVA Programming Language. Upon successful completion of this course, the students should be able to create Java programs that leverage the object-oriented features of the Java language, such as encapsulation, inheritance and polymorphism; use data types, arrays and other data collections; implement error-handling techniques using exception handling, create an event-driven GUI using Swing components; and implement I/O functionality to read from and write to text files. Prerequisite: CIS2321C COP1335C Pre or Corequisite: COP2361C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=54. 00

**COP2801C JAVA SCRIPTING (3)**
This course will teach students to write JavaScript that can be executed on any computer running compatible software. These programs will be created using this object-based scripting language and designed to interact over the Internet or any other similar network with an appropriate Web Browser. Students will learn JavaScript structure and syntax, how to interact with environment variables, use event handlers, perform form validation, create rollover effects and receive an overview of working with cookies. Students will conceptualize and develop interactive web sites using the full features of JavaScript.
COP2821C VI\$UAL BASIC DEVELOPMENT (3)
This course focuses on how to create an active X control, how to create a component object model (COM), how to incorporate active X and COM components within a visual basic program, how to write visual programs that access a database, and how to incorporate Internet technologies into a visual application. Prerequisite: COP2171C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=49.00

COP3703 DATABASE CONCEPTS (3)
This course applies a relational model approach to logical and physical data structure and data concepts and modeling. It also applies a model based on conceptual database design and implementation using current software.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

COP3847 WEB SYSTEMS AND TECHNOLOGIES (3)
Information Technology (IT) applications are increasingly web based. Web technology has grown to include a variety of businesses, academic, organizational and social applications. Diverse multi-cultural and multilingual user communities now depend on web technology. This knowledge area 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. Prerequisite: COP3703
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

COP4858 INTEGRATIVE PROGRAMMING AND TECHNOLOGY (3)
Organizations typically use many disparate technologies that need to communicate and work with each other. A key component to the discipline of information technology is the integration of applications and systems. This knowledge area examines the various types of programming languages and their appropriate use. It also addresses the use of scripting languages, architectures, application programming interfaces and programming practices to facilitate the management, integration and security of the systems that support an organization. Prerequisite: COP3847
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CPO2002 INTRODUCTION TO COMPARATIVE GOVERNMENT (3)
This course is a survey of political systems in the developed and the underdeveloped world. Democratic, non-Democratic, unitary and Federal systems will be analyzed and contrasted. Also the European community will be examined as an example of multinational cooperation.
This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CPO2140 GOVERNMENT AND POLITICS OF SPAIN (3)
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.
This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CRW1001 CREATIVE WRITING I (3)
The course is structured toward producing literary fiction, poetry, dramatic forms, creative non-fiction and other original expression. Student writing will be the primary basis for critical discussion with emphasis on fundamental aspects of poetry, fiction, and/or drama, as illustrated in master writers' work and demonstrated in student work. Lectures, readings, craft analysis, discussions, exercises and workshops provide students with the opportunity to develop the craft of creative writing. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CRW1100 FICTION WRITING (3)
Lectures, readings, craft analysis, discussions, writing exercises, and workshops provide students with the opportunity to analyze fiction and practice the craft of writing fiction. The course is structured toward producing literary fiction. Student writing and master writers' works will be the primary basis for critical discussion, with an emphasis on the fundamental aspects of fiction.
This course can be used for the AA degree.
CRW1300 POETRY WRITING (3)
Student writing as the basis for critical discussion with emphasis on analysis for the elements of poetry. Prerequisite: ENC1101. *This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CRW2002 CREATIVE WRITING WORKSHOP II (3)
A continuing development of creative writing ability. Prerequisite: CRW1001. *This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CRW2003 ADVANCED CREATIVE WRITING WORKSHOP (3)
A continuing development of creative writing ability. Students may work on independent writing projects. Directed independent study. Instructor's Approval or Prerequisite: CRW2002. *This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CRW2005 ADVANCED CREATIVE WRITING WORKSHOP (1)
A continuing development of creative writing ability. Students may work on independent writing projects. Directed independent study. Instructor's Approval or Prerequisite: CRW2002. *This course can be used for the AA degree.*
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CTS1106C UNIX (3)
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. *This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=54.00

CTS1111C LINUX + (4)
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.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=158.00

CTS1133C A+ ESSENTIALS (3)
This course provides students with the knowledge required to understand the fundamentals of computer technology, networking, and security, and the skills required to identify hardware, peripheral, networking, and security components.
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=73.00

CTS1134C NETWORK+ (4)
This course provides students with important knowledge and skills necessary to manage, maintain, troubleshoot, install, operate and configure basic network infrastructure; describe networking technologies; basic design principles; and adhere to wiring standards and use testing tools.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=164.00

CTS1212C ADOBE PHOTOSHOP (3)
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. Placement by test or Prerequisite: CGS1060C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=157.00
CTS1213C WINDOWS AND OUTLOOK FOR BUSINESS (3)
This course teaches students to utilize Windows operating system to be more productive, more collaborative, and more efficient. The course covers the skills necessary to be effective at protecting, optimizing, and troubleshooting the Windows OS environment. This course also teaches students advanced skills and design concepts for employing Microsoft Outlook to create, manage and organize messages, contacts and tasks. The course includes hands-on experiences with exercises and projects. The skills developed by students completing this course will help prepare them for the Microsoft Office Specialist Windows and Outlook certification exams. Prerequisite: CGS1060C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=124.00

CTS1220C MICROSOFT SPECIALIST: WORD (3)
This course teaches students advanced skills and design concepts for employing Microsoft Word to create and organize data. The course includes hands-on experiences with exercises and projects to provide students with a thorough working knowledge of Microsoft Word. This course is valuable for anyone wanting to create, customize, and organize documents by using formatting and visual content that is appropriate for the information presented. They will also learn to review, share, and secure content. The skills developed by students completing this course will help prepare them for the Microsoft Office Specialist Word certification exam. Prerequisite: CGS1060C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=124.00

CTS1225C MICROSOFT SPECIALIST: EXCEL (3)
This course teaches students advanced skills and design concepts for employing Microsoft Excel to organize and manipulate enterprise data. The course includes hands-on experiences with exercises and projects to provide students with a thorough working knowledge of Microsoft Excel. This course is valuable for anyone wanting to create and manipulate data, format data and content, create and modify formulas, present data visually, and collaborate on and secure data. The skills developed by students completing this course will help prepare them for the Microsoft Office Specialist Excel certification exam. Prerequisite: CGS1060C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=124.00

CTS1327C MICROSOFT WINDOWS CLIENT (4)
This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows client. It will also provide them with the knowledge and skills to use the IT Pro tools and productivity applications that ship with a Microsoft Windows client. The skills developed by students completing this course will help prepare them for the Microsoft Windows client certification. Prerequisite: CTS2131C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

CTS1347C MICROSOFT WINDOWS NETWORK INFRASTRUCTURE (4)
This course provides students with the knowledge and skills to configure and troubleshoot a Windows Server 2008 network infrastructure. Students will learn to implement and configure secure network access and implement fault tolerant storage technologies. Students will gain an understanding of the
network technologies most commonly used with Windows Server and IP-enabled networks. Students will also learn how to secure servers and maintain updates compliance. Prerequisite: CTS1134C CTS1327C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

**CTS1362C MICROSOFT SHARE POINT (3)**
This course will provide students with the knowledge and skills to employ Microsoft Share Point to perform all site user tasks. The student will learn to optimize Web Part pages for team use by adding and configuring Web Parts from the Web Part gallery as well as to customize dashboards to target the information presented. The student will also learn to focus on adapting SharePoint sites to their teams' needs and improve productivity. The course includes hands-on experience with exercises and projects to provide students with a thorough working knowledge of Microsoft Share Point. This course is valuable for anyone wanting to provide structure for information, extend out-of-the-box site features, solve business problems through composite applications, and facilitate collaboration with other site users. The skills developed by students completing this course will help prepare them Prerequisite: CTS1851C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=157.00

**CTS1800C ADOBE DREAMWEAVER (3)**
This course teaches students how to use the Adobe Dreamweaver Integrated Development Environment. Students learn Project requirements, website usability, using rich media content, content control tools, website building techniques, collaboration and Site testing, and how to manage and maintain websites. Prerequisite: CTS1851C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=157.00

**CTS1801C MACROMEDIA FLASH (3)**
This course teaches students how to produce vector-based animated and interactive Web sites using Adobe's Flash toolset. The course will cover everything from the basic interface to advanced button design and form interaction. Students will learn about the multimedia features in Flash, and learn how to take advantage of them. Prerequisite: CTS1851C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=157.00

**CTS1802C CASCADING STYLE SHEETS (3)**
This course will help students to understand and apply Cascading Style Sheets to separate the content from the style of the web pages. Topics covered will include text styling, working with images, navigation, replacing tables with CSS, form interfaces, positioning, layout, and future techniques. Prerequisite: CTS1851C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=157.00

**CTS1851C CERTIFIED INTERNET WEBMASTER FOUNDATION (4)**
This course is an entry-level course that provides students with baseline technical knowledge and skills of Internet, intranet, and extranet technologies. Students will gain a basic knowledge and/or competency of Internet skills and tasks in 3 core content areas: Internet Business Foundations, Site Development Foundations, and Network Technology Foundations. The skills developed by students completing this course will prepare them for the CIW Foundations certification exam. Placement test or Prerequisite: CGS1060C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=138.00

**CTS2120C SECURITY+ (4)**
This course provides the student with an understanding of the computer, network, infrastructure, and information security issues faced by industry worldwide. Expertise necessary to combat and protect intellectual property from theft and destruction are also developed. The skills developed by students who complete this course will prepare them for the Security+ certification exam. Prerequisite: CTS1134C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=158.00

**CTS2131C A+ PRACTICAL (3)**
This course provides students with the skills required to install, configure, upgrade, and maintain PC workstations, the Windows OS and SOHO networks, in addition the student will be able to utilize troubleshooting techniques and tools to effectively and efficiently resolve PC, OS, and network connectivity issues and implement security practices. Prerequisite: CTS1133C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=82.00

**CTS2156C MICROSOFT ENTERPRISE DESKTOP SUPPORT (4)**
This Microsoft IT Academy course teaches students the skills to support end users who run Microsoft Windows and applications that are included with the operating system, such as productivity applications used in a corporate environment and Microsoft Office applications. It provides students with the knowledge and skills needed to isolate, document and resolve problems on a Windows desktop or laptop computer and a working knowledge of operating in an Active Directory domain environment. The course includes the skills needed to resolve operating system issues by telephone, email, connecting to an end user's system remotely, or by visiting an end user's desktop. Prerequisite: CTS1327C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=150.00

**CTS2164C SOLUTION ARCHITECTURES (3)**
This course provides students with the knowledge and skills necessary to analyze business requirements in a given scenario and then define technical solution architectures that will optimize business results by using Microsoft development tools. Prerequisite: CGS1100
Pre or Corequisite: CIS2321C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=7.00

**CTS2339C MICROSOFT EXCHANGE SERVER (4)**
This course will provide students with the knowledge and skills to install, configure, route and manage a Microsoft Exchange environment. They will also learn how to provide client access, back up and restore databases, and manage recipient objects such as mailboxes, distribution groups, and contacts. The skills developed by students completing this course will help prepare them for the Microsoft Exchange certification. Prerequisite: CTS2345C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

**CTS2342C MICROSOFT WINDOWS ENTERPRISE ADMINISTRATION (4)**
This Microsoft IT Academy course provides students with an understanding of how to design a Windows Server Network Infrastructure that meets business and technical requirements for network services, to design Active Directory forests, domain infra-structure, sites and replication, administrative structures, group policies, and Public Key infra-structure solutions based on Windows Server to meet varying business and technical requirements. Prerequisite: CTS2343C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

**CTS2343C MICROSOFT WINDOWS APPLICATION INFRASTRUCTURE (4)**
This Microsoft IT Academy course provides students with an understanding of migrating and deploying Windows Server, including installation, configuration, and upgrading and with the knowledge and skills to configure, manage, monitor, and troubleshoot a Terminal Services (TS) environment. Special emphasis is given to upgrading common server configurations and using Windows Server Deployment Solution
Accelerator. Students will also learn to install, configure, maintain, and troubleshoot and Internet Information Services Web Server in Windows Server. Prerequisite: CTS2120C
CTS2346C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

CTS2345C MICROSOFT WIN DOWS ACTIVE DIRECTORY (4)
This Microsoft IT Academy course provides students with the knowledge and skills to configure and troubleshoot Active Directory services on Windows Servers. It will also introduce students to Active Directory roles such as AD, DS, AD LDS, AD SC, AD RMS, and AD FS. Students will also learn how to manage access to Active Directory resources, how to configure group policy objects, how to implement security using group policies and about AD DS and DNS integration. Prerequisite: CTS1347C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

CTS2346C MICROSOFT WINDOWS SERVER ADMINISTRATION (4)
This Microsoft IT Academy course provides students with the knowledge and skills to implement, monitor, and maintain Windows Servers. The skills the students will learn will enable them to perform the duties of a server administrator. Prerequisite: CTS2345C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

CTS2360C MICROSOFT SYSTEM CENTER CONFIGURATION (4)
This course provides students with the knowledge and skills to deploy and manage software and asset 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 certification. Prerequisite: CTS2345C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

CTS2361C MICROSOFT SHAREPOINT SERVER (4)
This course provides students with the knowledge and skills to plan, deploy, and maintain a Microsoft Windows SharePoint server in a production environment. The skills developed by students completing this course will help prepare them for the Configuring Microsoft Office SharePoint Server certification. Prerequisite: CTS2345C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=204.00

CTS2383 MANAGING A SERVER NETWORK OPERATING (3)
This course provides students with the knowledge and skills necessary to install and configure a network server and perform post-installation and day-to-day administrative tasks. The course gives the student the background needed to provide technical support for network servers. This course is taught using a networking 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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CTS2402C BUSINESS DEVELOPMENT USING VISUAL B (3)
This course will teach visual basic programmers, who currently build desktop applications and access corporate databases, the basics of how to built three tiers client/server solutions. Utilization of the Application Architecture Model. Utilize the VB programming system to build COM, DLLs and implement them in a multiuser environment using Transaction Server. Utilize MTS to address application infrastructure issues associated with building server-side COM objects that are used by the client. Create COM objects that use MTS services to participate in transactions and that use security. Utilize ActiveX Data Objects (ADO) from the middle tier to access data and invoke business and data services implemented in SQL. Implement business and data services in SQL Server database through the use of stored procedures. Apply basic debugging, error handling, and security techniques in a three-tier application. Prerequisite: COP2821C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=50.00

CTS2403C ACCESS VBA PROGRAMMING (3)
This course provides students with the comprehensive knowledge and skills necessary to implement application programming concepts and procedures, and to apply these skills to design, develop, and implement solutions based on Access for Windows. Prerequisite: CGS1540C COP2171C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=49.00

CTS2420C MICROSOFT: .NET FOUNDATIONS (3)
In this Microsoft IT Academy course, students will develop the knowledge and skills to program Microsoft .NET Framework applications. At course completion, students will develop applications that use type and standard contracts, manage common data by using collections, deploy and configure assemblies, monitor and debug applications, read and write files, and serialize data. Students will also use System. Drawing and System. Globalization, encrypt and hash data using cryptography, secure code, describe and use reflection, metadata, emitting objects services, threading, and application domains. This course will help students prepare for the Microsoft .NET Framework - Application Development Foundation certification. Prerequisite: COP2360C COP2361C
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=133.00

CTS2423C MICROSOFT: .NET WEB APPLICATION DEV (3)
In this Microsoft IT Academy course, students will develop the knowledge and skills to program Microsoft. NET Framework web applications. At course completion, students will have knowledge of ASP. NET and develop and deploy web applications by using either Visual Basic or C#. Students will also access data by using Microsoft ADO. NET and built-in data access tools. This course will help students prepare for the Microsoft .NET MCTS certification. Prerequisite: COP2071C CTS2420C
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=133.00

CTS2434C MICROSOFT SQL SERVER DEVELOPER I (3)
This course teaches students how to implement a Reporting Services solution in an organization. The course discusses how to use the Reporting Services development tools to create reports, and ow to use the Reporting Services management and administrative tools to mange a Reporting Services solution. Prerequisite: CIS231C COP2071C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=133.00

CTS2437C MICROSOFT SQL SERVER DATABASE ADMIN (4)
This course provides students with the knowledge and skills to maintain a Microsoft SQL Server database. The course focuses on teaching individuals how to use SQL Server product features and tools related to maintaining a database. Prerequisite: COP2071C CTS1134C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=133.00

CTS2438C MICROSOFT SQL SERVER DATABASE ADMIN (4)
This course provides students with the knowledge and skills to design, optimize, and maintain a database administrative solution for Microsoft SQL Server. Prerequisite: CTS2437C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=133.00

CTS2441C ORACLE DATABASE ADMINISTRATION I (4)
This course is your first step towards success as an Oracle professional, designed to give students a firm foundation in basic database administration. In this class, students will learn how to install and maintain an Oracle database. Students will gain a conceptual understanding of the Oracle database architecture and how its components work and interact with one another. Students will also learn how to create an operational database and properly manage the various structures in an effective and efficient manner including performance monitoring, database security, user management, and backup/recovery techniques. The lesson topics are reinforced with structured hands-on practices. This course is designed to prepare students for the corresponding Oracle Certified Administrator Associate exam. Prerequisite: COP2071C CTS1111C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=76.00
CTS2442C ORACLE DATABASE ADMINISTRATION II (4)
In this course, the students gain a much deeper understanding of possibly the most important job of a DBA - backup and recovery. The concepts and architecture that support backup and recovery, along with the steps of how to carry it out in various ways and situations, are covered in detail. This includes how to define and test your own backup and recovery scenarios. Also, the DBA learns how to manage memory effectively and how to perform some performance evaluation and tuning tasks, including using some of the advisors. All types of flashback technologies, scheduling jobs inside and outside of the database, and controlling system resource usage are also covered. This course is designed to prepare students for the corresponding Oracle Certified Administrator Professional exam. Prerequisite: CTS2441C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=76.00

CTS2445C ORACLE DEVELOPER (3)
This course starts with an introduction to PL/SQL and proceeds to list the benefits of this powerful programming language. Students are made aware of how to create PL/SQL blocks of application code that can be shared by multiple forms, reports, and data management applications. In addition, creation of anonymous PL/SQL blocks as well as stored procedures and functions are covered in this course. Students enhance their developer skills by learning to develop, execute, and manage PL/SQL stored program units such as procedures, functions, packages, and database triggers. Understanding the basic functionality of how to debug functions and procedures using the SQL Developer Debugger gives way to refined lines of code. Students also learn to manage PL/SQL subprograms, triggers, declaring Prerequisite: CIS2321C COP2071C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=96.00

CTS2446C ORACLE DEVELOPER II (3)
Oracle Forms Developer is used to build high performance applications for the Internet. Forms Developer is a web based application development tool that helps in quickly constructing database forms and business logic with minimal of effort. In this course students build, test, debug, and deploy interactive Internet applications. Working in a graphical user interface (GUI) environment, they develop an order entry application from the ground up. This application incorporates several advanced features that provide a rich user experience while implementing business rules. This course is designed to prepare students for the corresponding Oracle Forms Developer Certified Professional Certification. Prerequisite: CTS2445C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=96.00

CTS2451C MICROSOFT SQL SERVER DEVELOPER II (3)
This course provides in-depth knowledge on designing a Business Intelligence solution by using Microsoft SQL Server. The course will cover design and management of reports, data mining models, administering a BI solution, designing the BI architecture, designing and deploying SSIS packages, and designing an analysis services database. Prerequisite: CTS2434C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=133.00

CTS2464C SUN: ADVANCED JAVA PROGRAMMING (3)
This course is designed to prepare students for the Sun 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. Prerequisite: COP2361C COP2800C
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=76.00

CTS2465C SUN: ADVANCED JAVA DEVELOPMENT (3)
This course is designed to help prepare students for the Sun Certified Developer certification. Upon successful completion of this course, students should be able to implement a program from the ground up that could be used in a commercial intranet application and will develop...
classes to connect programs to SQL database systems using the core aspects of the Java Database Connectivity (JDBC) application programming interface (API). Two-tier and three-tier Java technology applications will be created, as well as multithreaded servers and remote objects using Java Remote Method Invocation (Java RMI). Prerequisite: COP2071C
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=76.00

CTS2803C FLASH PROGRAMMING (3)
This course covers advanced Adobe Flash concepts utilizing the ActionScript language. Topics will include detecting client browser and plug-ins, user interface components, working with audio and video, loading data, sending data, and working with Flash Remoting and web services. Concepts are applied through team and individual projects using the latest version of Adobe Flash. Prerequisite: COP1334C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=157.00

CTS2852C CLIENT-SIDE SCRIPTING (3)
This course teaches developers how to use the features of the JavaScript language and design client-side, 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. Prerequisite: COP1334C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=138.00

CTS2854 CIW: E-COMMERCE STRATEGIES AND PRA (3)
This course teaches students how to conduct business online using both business-to-business and business-to-consumer e-commerce models. Students will also explore the technological issues associated with constructing an electronic-commerce Web site. Students will examine strategies and products available for building electronic-commerce sites, examine how sites are managed, and explore how they can complement an existing business infrastructure. This course, in combination with CTS2855C, helps prepare students for the CIW E-Commerce Strategies and Practices certification exam. Prerequisite: CTS1851C
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

CTS2855C CIW: E-COMMERCE STRATEGIES AND PRA (4)
This course allows students to explore real world scenarios as an E-Commerce Designer would and focuses on standards, technologies and practices for both business-to-business and business-to-consumer e-commerce models. Students will understand and facilitate relationships among marketing, promotion, customer service, user interaction, purchasing methods, and secure transactions by using SSL and SET, payment gateways, inventory control, shipping and order information and site performance testing and evaluation. This course, in combination with CTS2854, helps prepare students for the CIW E-Commerce Strategies and Practices certification exam. Prerequisite: CTS2854
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=138.00

CTS2857C SERVER-SIDE SCRIPTING (3)
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. Prerequisite: COP1334C
Lec Hrs=36 Lab Hrs=12 Oth Hrs=0 Fees=64.00

CVT1200 CARDIOPULMONARY PHARMACOLOGY (3)
This course provides an overview of drugs related to the cardiopulmonary system with special emphasis on the drugs used to treat cardiac and pulmonary patients. Prerequisite: RET1485
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DAA1100 BEGINNING MODERN DANCE I (2)
Basic modern dance technique, exercises, and choreography are used to achieve physical objectives, to increase artistic self-awareness and to extend cultural enrichment. Coeducational.
This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00
DAA1101 MODERN DANCE II (2)
A continuation of DAA1104. Further development of modern dance techniques with an emphasis on vocabulary, alignment, movement phrasing, and rhythm. Participation in semester dance concert required. Coeducational. Permission of instructor or Prerequisite: DAA1100. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

DAA1501 JAZZ DANCE II (2)
A course in jazz technique with emphasis on various jazz styles and performance. Includes warm-up, stretch and strengthening, centre exercises, and intermediate level jazz dance combinations. Coeducational. Permission of Instructor. Prerequisite: DAA1504. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

DAA1504 JAZZ DANCE I (2)
This is a course in Jazz technique. Included are warm-up, stretch and strengthening, centre exercises, and basic jazz combinations. Coeducational. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

DAA1680 DANCE REPERTORY (1)
Participation as a dancer/performer in dance works of ballet, jazz, and modern vocabularies. Works include those of dance faculty, guest artists, as well as student choreography. Coeducational. May be repeated for credit. Corequisite: Student must be enrolled in at least one BCC dance technique class. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

DAA2102 MODERN DANCE III (2)
A continuation of DAA1105 with an emphasis on advanced movement phrases and combinations necessary to perform modern dance repertory. Further emphasis will be placed on the development of the students' style and performance quality. Coeducational. May be repeated for credit. Prerequisite: Permission of instructor or Prerequisite: DAA1101. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

DAA2220 POINTE I (1)
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. Prerequisite: DAA2282. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

DAA2280 BALLET I (2)
An academic study of techniques and theoretical concepts of ballet for the performance-oriented student. Includes warm-up, barre, and centre combinations. Coeducational. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

DAA2281 BALLET II (2)
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 Prerequisite: DAA2280. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

DAA2282 BALLET III (2)
Continuation of DAA1205. Emphasis on developing strength and coordination in more complex phrasing and movement. This course will explore and develop an understanding of the vocabulary, technique, and theoretical concepts of ballet on an intermediate level. Students are required to audition for BCC student dance ensemble. Coeducational. May be repeated for credit. Permission of Instructor or Prerequisite: DAA2281. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

DAA2610 DANCE COMPOSITION (2)
This course is designed to introduce the student to the creative process of dance composition. Through the use of compositional structures and choreographic devices, the student will create movement studies. Improvisation, aesthetic principles and elements of dance will be examined. Prerequisite: DAA1101 or DAA2281.
Prerequisite: DAA1101. This course can be used for the AA degree.

Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

**DAN2600 MUSIC FOR DANCE (2)**
Designed to provide both the dancer and choreographer with the musical knowledge and tools to enhance how they use music in their discipline and how they communicate their musical needs to musicians. This course can be used for the AA degree.

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEA0000 INTRODUCTION TO DENTISTRY (1)**
An overview of dentistry and the dental assisting profession including its history, ethical and legal aspects, duties and responsibilities of the dental health team, professional organizations, and proper conduct and grooming of the dental assistant. 2 hrs. Lec. Term I. Instructor approval or Corequisite: DEA0025

Lec Hrs=60 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEA0025 PRE CLINICAL (2)**
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. Special fee charged. 4 hrs. Lec. Term I Instructor's Approval or Pre or Corequisite: DEA0025L DES0103 DES0844

Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEA0025L PRECLINICAL LABORATORY (4)**
Laboratory/clinical portion of DEA0025. Provides hands-on instruction of use and sterilization of all instruments and equipment used in the practice of dentistry. Special fee charged. 8 hrs. Lab. /Clinical. Term I. Instructor approval or Pre or Corequisite: DEA0025L DES0103 DES0844

Lec Hrs=120 Lab Hrs=0 Oth Hrs=120 Fees=240.18

**DEA0130 ALLIED DENTAL THEORY (1)**
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. 4 hrs Lec. Term II. Instructor's approval or Prerequisite: DEA0025 DES0205

Pre or Corequisite: DES0831 DES0831L

Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEA0150 DENTAL PSYCHOLOGY (1)**
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. 1 hr. Lec. Term II. Instructor approval or Prerequisite: DEA0000 DEA0025 DES0844

Pre or Corequisite: DES0801

Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEH1002 PRECLINICAL DENTAL HYGIENE I (2)**
A course designed to provide knowledge of the principles of dental hygiene with a detailed study of instrumentation. The course includes data collection and mastery of beginning techniques in dental care. Pre or Corequisite: DEH1002L DEH2400 DEH2840L

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEH1002L PRECLINICAL DENTAL HYGIENE LAB (3)**
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. Prerequisite: BSC1085 BSC1085L
Corequisite: BSC1086 BSC1086L DEH1002
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=90.18

**DEH1130 ORAL HISTOLOGY AND EMBRYOLOGY (2)**
This course studies the embryonic development and the histology of the components of the oral cavity. This includes a comprehensive study of the cells and tissues of the oral cavity. Pre or Corequisite: DEH1602 DEH1802 DEH1802L.

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEH1602 PERIODONTOLOGY (3)**
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. Prerequisite: DEH1800 DEH1800L DEH2300

Pre or Corequisite: DEH1802 DEH1802L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEH1602L PERIODONTOLOGY LAB (1)**
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. Prerequisite: DEH1800 DEH2300
Pre or Corequisite: DEH1130 DEH1602 DEH1800L DEH1802 DEH1802LLec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=111.18

**DEH1800 DENTAL HYGIENE I (2)**
This course provides instruction on removal of hard and soft deposits, treatment planning, preventive procedures, care of instruments, pre and post operative procedures, and dental hygiene diagnosis. Prerequisite: DEH1002 DEH1002L DEH2400
Pre or Corequisite: DEH1800L DEH2300 DEH2840L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEH1800L DENTAL HYGIENE I CLINIC (2)**
This course will provide clinical experience in comprehensive patient care. Emphasis is placed on treatment planning and dental hygiene assessment techniques. Prerequisite: DEH1002 DEH1002L DEH2400
Pre or Corequisite: DEH1800 DEH2300 DEH2840L
Lec Hrs=0 Lab Hrs=0 Oth Hrs=96 Fees=219.18

**DEH1802 DENTAL HYGIENE II (4)**
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. Prerequisite: DEH1800 DEH1800L DEH2300
Pre or Corequisite: DEH1802
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEH1802L DENTAL HYGIENE II CLINIC (3)**
This course will provide clinical experience in treatment planning, periodontal charting, ultrasonic scaling and comprehensive dental hygiene care. Prerequisite: DEH1800 DEH1800L DEH2300
Pre or Corequisite: DEH1802
Lec Hrs=0 Lab Hrs=0 Oth Hrs=192 Fees=239.18

**DEH2300 DENTAL PHARMACOLOGY (2)**
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. Prerequisite: DEH1002 DEH1002L DEH2400
Pre or Corequisite: DEH1800 DEH1800L DEH2840L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**DEH2400 GENERAL AND ORAL PATHOLOGY (2)**
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. Pre or Corequisite: DEH1002 DEH1002L DEH2840L.

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DEH2701 COMMUNITY DENTAL HEALTH (2)
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. Pre or Corequisite: DEH1130
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DEH2701L COMMUNITY DENTAL HEALTH LAB (1)
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. Prerequisite: DEH1130
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=106.18

DEH2804L DENTAL HYGIENE III CLINIC (4)
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. Prerequisite: DEH2806 DEH2806L
Lec Hrs=0 Lab Hrs=0 Oth Hrs=192 Fees=247.18

DEH2806 DENTAL HYGIENE IV (2)
This course provides continuation of theoretical material related to clinical dental hygiene practice. It includes discussion on case information, dental hygiene treatment of advanced periodontal patients, patients with special needs and dental hygiene practice rules and regulations for the state of Florida. Prerequisite: DEH1802 DEH1802L

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DEH2806L DENTAL HYGIENE IV CLINIC (4)
This laboratory course provides continuation of clinical experience with patients, developing previously learned skills and knowledge. The emphasis is placed on advanced instrumentation and patient management skills necessary to treat the more difficult patient. Prerequisite: DEH1002 DEH1002L DEH1130 DEH1602 DEH1800 DEH1800L DEH1802 DEH1802L DEH2400 DES2050
Lec Hrs=0 Lab Hrs=0 Oth Hrs=192 Fees=247.18

DEH2840L ADVANCED DENTAL TECHNOLOGY LAB (1)
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. Pre or Corequisite: DEH1002 DEH1002L DEH1800 DEH1800L DEH2400
DEH2400 Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=126.18

DEH2944L ADVANCED DENTAL HYGIENE CLINIC (1)
This course is designed for students who have successfully graduated from Broward Community College's Dental Hygiene Program to maintain and/or update clinical skills prior to taking the Florida State Board Clinical Examination.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=76 Fees=61.18

DEP2002 DEVELOPMENTAL PSY I: CHILD PSYCHOLOGY (3)
Study of the concepts and principles of growth and development in infancy and childhood. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DEP2004 DEVELOPMENTAL PSYCHOLOGY (3)
This is a developmental psychology course that considers human growth from conception to
DEP2302 DEVELOPMENTAL PSYCH II: ADOLESCENT (3)
The personal, social and developmental aspects of adolescence and early adulthood are reviewed in this course. A focus is placed upon the research dealing with the characteristic problems and adjustments of this life stage. Prerequisite: PSY2012. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00. This course can be used for the AA degree.

DES0021 DENTAL ANATOMY AND PHYSIOLOGY (1)
The study of head and neck anatomy with emphasis placed on the structure, morphology, and function of the primary and permanent human dentitions. 3 hrs.lec. Term I. Instructor's approval or Pre or Corequisite: DEA0025 DES0205 DES0830 Lec Hrs=45 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DES0031 DENTAL MATERIALS (1)
Designed to familiarize the student with the various types of materials, their physical properties and characteristics, proper manipulation and designed application in the practice of dentistry. _2 hrs. lec. Term I Instructors approval or Corequisite: DES0103L Lec Hrs=35 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DES0103L DENTAL MATERIALS LAB (1)
Laboratory portion of DES0100. Proper manipulation and designed application in the practice of dentistry. Projects demonstrating proficiency in the technical applications and proper manipulation of specified dental materials will be required. Special fee charged. Instructors approval or 3 hrs lab Term I. Corequisite: DES0103 Lec Hrs=0 Lab Hrs=45 Oth Hrs=0 Fees=137.18

DES0205 DENTAL RADIOGRAPHY (1)
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. 2 hrs. Lec. Term I. Instructor's approval or Corequisite: DES0205L Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DES0205L DENTAL RADIOGRAPHY LAB (2)
Laboratory portion of DES0200. Proper techniques for exposing, processing, and mounting radiographs. Laboratory exercise demonstrating proficiency in these techniques will be required. 4 hrs. lab. Term I. Instructor approval or Corequisite: DES0205 Lec Hrs=0 Lab Hrs=0 Oth Hrs=60 Fees=154.18

DES0400 BASIC ANATOMY AND PHYSIOLOGY (1)
A basic anatomy and physiology course designed specifically to meet the needs of dental assisting students. Emphasis will be placed on the human body structure, functions of its components and associated diseases which affect the total care of the dental patient. Prerequisite: DEA0025 DES0021 Pre or Corequisite: DES0831 DES0831L Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DES0501 DENTAL OFFICE MANAGEMENT (1)
The study of efficient dental office management. Basic concepts to be presented will include telephone etiquette and communication. Guidelines for better interpersonal relations, methods for effective appointment control, dental bookkeeping systems and practices, business writing techniques, collection and billing, filing of patients records and procedures for tax and health insurance forms. Computer proficiency must be demonstrated by the student for course completion. 2 hrs. Lec. Term II. Instructor approval or Prerequisite: DEA0000 DEA0025 Pre or Corequisite: DES0801 Lec Hrs=39 Lab Hrs=0 Oth Hrs=0 Fees=0.00
DES0801 CLINICAL PROCEDURES I (1)
Lecture series acquaints the student with the necessary background material and assisting procedures involved in each dental specialty. Special fee charged. 1 hr Lec Term II Instructor's approval or Prerequisite: DEA0025 DEA0025L

Pre or Corequisite: DES0801L
Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

DES0801L CLINICAL PROCEDURES I LAB (5)
Practicum phase provides the opportunity for each student to receive closely supervised individual instruction in all phases of chairside assisting. Special fee charged. 12 hrs. Lab. Term II. Instructor's approval or Prerequisite: DEA0025 DEA0025L

Corequisite: DES0801
Lec Hrs=0 Lab Hrs=0 Oth Hrs=165 Fees=237. 18

DES0802 CLINICAL PROCEDURES II (1)
Practicum phase is a continuation of DES0801 with the addition of a supervised externship program utilizing dental offices and public health facilities in the community. Lecture demonstration series focuses on selected dental topics pertaining to effective dental assisting and the additional duties permitted by rules and regulations of the Florida State Board of Dentistry. 30 hrs. minimum per week. Term III, Session II. Prerequisite: DEA0025 DEA0025L DES0801L DES0801

Corequisite: DES0802L
Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=61. 18

DES0802L CLINICAL PROCEDURES II LABORATORY (4)
Practicum phase is a continuation of DES0801L with the addition of a supervised externship utilizing dental offices and public health facilities in the community. Special fee charged. Field experience. 30 hrs. minimum per week. Term III, Session II. Prerequisite: DEA0025 DEA0025L DES0801L DES0801

Corequisite: DES0802
Lec Hrs=0 Lab Hrs=0 Oth Hrs=135 Fees=61. 18

DES0830 EXPANDED FUNCTIONS I (2)
The course is designed to provide the basic knowledge and clinical practice necessary for the dental assisting student to perform the expanded functions permitted by the rules and regulations of the Florida State Board of Dentistry. Instructors approval or Prerequisite: DEA0025 DEA0025L

Pre or Corequisite: DES0801 DES0801L
Lec Hrs=60 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

DES0831 EXPANDED FUNCTIONS II (1)
The course is designed to be a continuation of dental auxiliary expanded functions I. It will provide the basic knowledge necessary to perform the more complex expanded functions permitted by the rules and regulations of Florida State Board of Dentistry. 1 hr. lcc. Term II. Instructor approval or Prerequisite: DEA0025 DEA0025L DES0830

Pre or Corequisite: DES0801 DES0801L DES0831L
Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

DES0831L EXPANDED FUNCTION II LAB (2)
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. Special fee charged. 3 hrs. lab. Term II Instructors approval or Prerequisite: DEA0025 DEA0025L DES0830

Pre or Corequisite: DES0801 DES0801L DES0831
Lec Hrs=0 Lab Hrs=60 Oth Hrs=0 Fees=225. 18

DES0834 PREVENTIVE DENTISTRY (I)
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. Instructor approval or Pre or Corequisite: DEA0025

Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
DES1050 PAIN CONTROL AND DENTAL ANESTHESIA (1)
This course provides a study of agents used in dentistry for local anesthesia and pain control. Prerequisite: DEH1002 DEH1002L DEH1800 DEH1800L DEH2300 DEH2400 Pre or Corequisite: DEH1130 DEH1802 DEH1802L
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

DIG2100C WEB DEVELOPMENT 1 (3)
The student will learn the basics of using Browsers to view web sites, create a web site and will progress through the processes of analysis, design, development, and implementation of complete web sites using HTML, XHTML, XML language with text editors. This course includes Web Programming with HTML, XHTML, XML, with emphasis on CSS on layout and structure of web sites, hyperlinks, multimedia, forms, tables, testing, maintenance and uploading web sites to servers applying good web design and web site usability.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=35.00

DIG2101C WEB DEVELOPMENT 2 USING DREAMWEAVER (3)
This course uses Adobe Dreamweaver software to create websites importing Flash and video movies and different disciplinary content. Students will explore the pre-production, layout, structure, and Internet Services Provider (ISP) of websites. Students will test and debug their websites from your host ISP. Students should have complete knowledge of graphics and XHTML.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=38.00

DIG2109C DIGITAL PUBLISHING WITH INDESIGN (3)
This course is designed to teach desktop publishing using Adobe InDesign with emphasis on typography and desktop publishing techniques. Student will learn to layout and design documents with visual impact. Effective use of graphics, color, print separations, export to PDF, and preflight topics as they are used with desktop publishing are covered.

Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=35.00

DIG2115C DIGITAL IMAGING FUNDAMENTALS USING (3)
This course uses Adobe Photoshop software to create images for digital media applications. Students will learn how to create, edit, and manipulate graphics. Color theory, resolution, special effects, output, and design will be covered.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=46.00

DIG2116C DIGITAL IMAGING ADVANCED (3)
The student will learn the advanced image processing techniques to prepare images for various output venues for web and multimedia. Multimedia and web developers use sophisticated graphic software (Fireworks and Photoshop or other similar software) to create interactive and stunning visuals that are easily integrated into dynamic multimedia and web pages. Students will learn how to create graphics with vector and bitmap images, apply special effects, build buttons, rollovers, animated gifs, image maps, compare graphic formats, optimize web graphics & palettes. Projects focus on resolution, color management including palettes and bit depth, optimization, image and texture creation, alpha channels for compositing, and special effects. Industry standard software will be used including Photoshop and Fireworks. Prerequisite: DIG2115C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=46.00

DIG2132C DIGITAL ART & DESIGN WITH ILLUSTRAT (3)
This course provides a sound theoretical introduction to the concepts, principles, and techniques of digital art and design. Explores the use of the computer as an art production and drawing tool using drawing and illustration software such as Adobe Illustrator to create and generate visuals.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=35.00
This course can be used for the AA degree.

DIG2280C DIGITAL VIDEO/AUDIO EDITING (3)
This course is an introduction to video/audio production for digital media-multimedia. Students will gain an in-depth knowledge and skills needed for video production to include hands-on experience in videography and video/audio editing for the creation of video/audio projects to include but not limited to documentaries/music videos/storytelling and commercials/public service announcements. Software used: the Adobe Production Suite including Premiere Pro, SoundBooth, Audition and Encore.

Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=49.00

DIG2292C DIGITAL POST PRODUCTION WITH AFTER (3)
This course focuses on digital post-production used for film, animation, video, digital media, and the web. Using Adobe After Effects students integrate both technical and aesthetic, 2d graphics, 3d models and animations, and background elements in projects. Students will become familiar with match-moving and compositing techniques.

Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=89.00

DIG2302C 3D ANIMATION I (3)
This course covers 3-D modeling, mapping, and rendering. Students will also learn techniques used in moving images and simulations as well as applying lighting and materials to 3-D objects.

Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=72.00

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

Prerequisite: DIG2302C

Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=52.00

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

Prerequisite: DIG2303C

Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=52.00

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

Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=49.00

DIG2360C ADVANCED WEB ANIMATION WITH FLASH (3)
This course will teach students to write ActionScript that can be executed on any computer running compatible software. These programs will be created using Object-Based Scripting Language and designed to interact over the internet or any other similar network with an appropriate Web Browser. Students will learn ActionScript structure and syntax, how to interact with environment variables, use event handlers, functions, and methods and receive an overview of working with Object-Oriented methodologies. Students will conceptualize and develop interactive websites and games using the full features of ActionScript.

Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=49.00

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

This course can be used for the AA degree.
DIG2580C DIGITAL MEDIA PORTFOLIO (3)
This is a capstone course intended for students to apply knowledge gained to prepare digital print and PDF portfolios with effective design. The student will produce a portfolio to show prospective employers.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=89.00
This course can be used for the AA degree.

DIG2940 INTERNSHIP IN DIGITAL MEDIA (4)
An Internship in Digital Media will provide the student with practical work experience in the field. In addition the student will produce an e-portfolio and resume to present to potential employers. The student will work a minimum of 100 hours Prerequisite: DIG2101C DIG2115C DIG2500C
Lec Hrs=24 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

DSC1002 TERRORISM AND DOMESTIC SECURITY (3)
A study of domestic and international terrorism as it relates to domestic security. Topics include terrorist organizations and motivations, investigating terrorism threats, conducting vulnerability assessments of potential terrorist targets, and the role of government agencies in response to a terrorist incident and recovery afterwards.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

DSC1006 INTRODUCTION TO HOMELAND SECURITY (3)
This course will introduce students to the vocabulary and important components of Homeland Security. Students will learn about the important agencies associated with Homeland Security and their inter-related duties and relationships. Students will examine historical events that impact Homeland Security. Students will explore state, national, and international laws impacting Homeland Security and students will examine the most critical threats confronting Homeland Security.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

DSC2242 TRANSPORTATION & BORDER SECURITY (3)
Overview of modern border and transportation security challenges (post 9/11 attacks to the present) as related to our transportation infrastructure, including seaports, ships, aircraft, airports, trains, train stations, trucks, highways, bridges, rail lines, pipelines and buses. The course will also explore technology used to enhance security of borders and transportation systems. Students will be required to discuss the legal, economic, political and cultural concerns associated with transportation and border security.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

DSC2590 INTELLIGENCE ANALYSIS & SECURITY (3)
This course examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks or disasters, man-made and natural. It also explores the vulnerabilities of our national defense and private sectors and threats posed to these institutions. Students will discuss substantive issues regarding intelligence support of homeland security measures and explore how the intelligence community operates.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

EAP0100C LISTENING/SPEAKING I (3)
A beginning level speaking and listening course. Students develop the ability to understand frequently used words in oral contexts and understand and respond appropriately to simple phrases and questions. PREREQUISITE: Through placement testing and/or department recommendation.
Lec Hrs=48 Lab Hrs=13 Oth Hrs=0 Fees=20.00

EAP0120C ESL READING I (3)
This is a level 100 beginning ESL reading course designed for students in English for Academic Purposes (EAP) programs. It emphasizes vocabulary and comprehension on a basic level. Placement in EAP0120C is determined by...
assessment tests and/or referral. Students must earn a C or higher to proceed to EAP0220C.
Lec Hrs=48 Lab Hrs=13 Oth Hrs=0 Fees=20.00

EAP0185C ESL GRAMMAR/WRITING I (6)
A low-beginning level combined skills course for speakers of other languages designed principally to guide the students to the development of basic grammar and basic writing structures as applied to academic English. Students will develop writing skills in the context of guided discourse on personal topics with an emphasis on logical thought and mechanics. 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. Prerequisite: EAP0185C
Lec Hrs=96 Lab Hrs=13 Oth Hrs=0 Fees=20.00

EAP0200C LISTENING/SPEAKING II (3)
A high beginning level listening and speaking course. Students continue to develop the ability to understand frequently used words in oral contexts and understand and appropriately respond to simple phrases and questions. PREREQUISITE: Through placement and/or department recommendation. Prerequisite: EAP0100C
Lec Hrs=48 Lab Hrs=13 Oth Hrs=0 Fees=20.00

EAP0220C ESL READING II (3)
This is a level 200 high beginning ESL reading course designed for students in English for Academic Purposes (EAP) programs. It emphasizes vocabulary and comprehension on a basic level. 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 Prerequisite: EAP0120C
Lec Hrs=48 Lab Hrs=13 Oth Hrs=0 Fees=20.00

EAP0285C ESL GRAMMAR/WRITING II (6)
A high-beginning level combined skills course for speakers of other languages designed principally to guide the students to the development of basic grammar and writing structures as applied to academic English. Students will develop writing skills in the context of guided discourse on personal topics with an emphasis on logical thought and mechanics. The requirement to move to the next level (EAP0485C) is a C or higher. With a D or
F, a student must repeat EAP0385C. Prerequisite: EAP0285C
Lec Hrs=96 Lab Hrs=13 Oth Hrs=0 Fees=20. 00

EAP0400C COMMUNICATION SKILLS IV (3)
Designed to guide the students toward applying pronunciation, phrasing, and intonation of oral American English to communication situations in commercial, academic, and social settings. Involves interview presentation and emphasis on developing listening skills. With a D or an F, a student must repeat EAP0400C. Special fee charged. Prerequisite: EAP0300C
Lec Hrs=48 Lab Hrs=13 Oth Hrs=0 Fees=20. 00
*This course can be used for the AA degree.*

EAP0420C ESL READING IV (3)
This is a level 400 high intermediate ESL reading course designed for students in English for Academic Purposes (EAP) programs. It emphasizes vocabulary and comprehension on an intermediate level. 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 CPT for further reading placement. Prerequisite: EAP0320C
Lec Hrs=48 Lab Hrs=13 Oth Hrs=0 Fees=20. 00
*This course can be used for the AA degree.*

EAP0485C ESL GRAMMAR/WRITING IV (6)
A high intermediate combined skills course for speakers of other languages designed principally to guide the students to the mastery of complex grammar and sentence structures, and basic paragraph writing. 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. Prerequisite: EAP0385C
Lec Hrs=96 Lab Hrs=13 Oth Hrs=0 Fees=20. 00

EAP1540C ESL ADVANCED COMPOSITION I (3)
A composition course in English for speakers of other languages. Designed principally to guide the student to the mastery of paragraph structure using various 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. Prerequisite: EAP0400C EAP0420C EAP0485C
Lec Hrs=48 Lab Hrs=13 Oth Hrs=0 Fees=20. 00
*This course can be used for the AA degree.*

ECO2013 PRINCIPLES OF MACROECONOMICS (3)
An introductory course in macroeconomic principles covering basic economic problems and concepts. Topics discussed and analyzed include basic economic problems of unemployment and inflation. Students will recognize the role of households, businesses and governments in the market economy and in their own lives. This is a writing credit course. *This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

ECO2023 PRINCIPLES OF MICROECONOMICS (3)
An introductory course stressing microeconomic theories. Topics studied include the theory and application of supply and demand elasticity; theory of consumer demand, utility; production and cost theory including law of diminishing returns; the firm's profit-maximizing behaviors under market models ranging from pure competition to pure monopoly; the theory of income distribution; comparative advantage, trade policies exchange rates, balance of payments, and other international issues. This is a writing credit
course. Prerequisite: Completion of prep reading
obligation.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

ECO2220 MONEY AND BANKING (3)
A general survey of the economics of money and
banking covering the evolution, nature and
functions of money; the nature of banking and its
regulation; monetary standards; structure and
functions of the Federal Reserve System;
monetary policy, monetary theory and the price
level; and the role of banking and money in
international finance. Prerequisite: ECO2013
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

ECS2390 THE ECONOMY OF SPAIN (3)
An analysis of the Spanish economic system
covering the historical development in the public
and private sectors; agriculture and industry; and
foreign trade relations. Only offered in
conjunction with the Semester-In-Spain program.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

EDF1005 INTRODUCTION TO THE
TEACHING PROFES (3)
This is a survey course including historical,
sociological, and philosophical foundations of
education, governance and finance of education,
educational policies, legal moral and ethical issues
and the professionalism of teaching. Students will
be provided exposure to the Florida Educator Accomplished Practices, Sunshine State
Standards, and the Professional Educator
Competencies. A minimum of 15 hours of field-
based experience is required working with diverse
populations of children in schools or similar
settings that are not virtual.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EDF2085 INTRO TO DIVERSITY &
EXCEPTIONALITI (3)
Designed for the prospective educator, this
course provides the opportunity to explore issues
of diversity, including an understanding of the
influence of culture, socioeconomic status,
etnicity/race, gender, religion, exceptionality,
language, and age upon the educational
experience. Students will explore personal
attitudes toward diversity and exceptionalities.
Students will be provided exposure to the Florida Educator Accomplished Practices, Sunshine State
Standards, and Professional Educator
Competencies. A minimum of 15 hours of field-
based experience is required working with diverse
populations of children in schools or similar
settings that are not virtual.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EDF3280 INSTRUCTIONAL STRATEGIES
(3)
This course prepares participants to become
proficient in planning, organizing, and
implementing instructional strategies for the
contemporary PK-12 classroom. A variety of
research-validated instructional strategies are
reinforced, including those that support
constructivist approaches to classroom
organization and student learning. Participants
will learn to identify, deliver and improve
instructional strategies that are most appropriate
in specific circumstances.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39. 75

EDF4430 EDUCATIONAL TESTS AND
MEASUREMENTS (3)
This course helps Education majors develop a
philosophy of assessment and understand how a
variety of measures combine to provide an
accurate picture of student progress and
achievement in the current multicultural
classroom, develop knowledge and skills
necessary to measure and assess learner progress
effectively and develop actual teacher assessment
skills and acquire skills in and perspectives on
traditional and alternative assessment strategies.
Topics include the basic principles of
measurement, formative and summative
assessment strategies, test construction, performance assessments, reading and interpreting data from state and standardized achievement tests, and fairness in accommodating diverse learners. Prerequisite: EDF3280
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

EDF4930 SPECIAL TOPICS IN TEACHER EDUCATION (1)
This course focuses on current and emerging issues in teacher education. Its format and topic will vary by semester.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EDG2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

EDG4410 CLASSROOM MANAGEMENT (3)
This course provides an identification and knowledge of classroom management and communication theories, strategies, and concerns. Emphasis will be placed on Behavior Management, Discipline and Reward Strategies, Accommodating Special Needs Pre-professional educators, Managing Diverse Cultures, Establishing Rapport and Credibility, Effective Communications Strategies, and Legal and Safety Issues as they apply and relate to the classroom setting. Prerequisite: EDF3280
Pre or Corequisite: RED3352
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

EDP2002 INTRODUCTION TO EDUCATIONAL PSYCHOLOG (3)
This course reviews psychological principles relevant to effective teaching and learning. Stage theories will be used to address issues of pupil variability. The course will enable students to design and use objectives. Units on instruction will include behavioral, information processing, humanistic and cognitive theories. Finally, measurement and evaluation, as well as classroom management, will be addressed.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

EDP4004 PRINCIPLES OF EDUCATIONAL PSYCHOLOG (3)
This course provides a foundation in educational psychology and its application to classroom settings. Special emphasis is placed on development, learning theory, cognition, motivation, diversity, teaching, and assessment. Pre or Corequisite: EDF1005 EDF2085 EME2040
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EEC1200 EARLY CHILDHOOD EDUCATION (3)
This course reviews the history and present day aspects of early childhood programs for infants, toddlers, preschool, and school children. Basic principles and foundations of early childhood education are covered.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

EEC1603 CHILD GUIDANCE (3)
This course provides child guidance and group management techniques to foster the development of self-esteem, self-control, and social skills in young children.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EET1015C DC CIRCUITS (5)
This is a first course in electric circuits. Upon completion of this course the student should demonstrate an understanding of the definitions and interrelationships of voltage, current and power in circuits containing passive circuit elements and multiple sources. Extensive laboratory experience is included. Pre or Corequisite: MTB1325
Lec Hrs=64 Lab Hrs=32 Oth Hrs=0 Fees=4.00
This course can be used for the AA degree.

EET1025C AC CIRCUITS (4)
This is a first course in electric circuits. 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. Prerequisite: EET1015C MTB1325
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=4.00
This course can be used for the AA degree.

**EET1084C INTRODUCTION TO ELECTRONICS (3)**
This course provides an introduction to the basic fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. This course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to basic measurement involving both analog and digital circuits.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**EET1141C LINEAR TECHNIQUES I (3)**
This is the first course covering semiconductor 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. Prerequisite: EET1015C.
This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=4.00

**EET2142C LINEAR TECHNIQUES II (4)**
This is the second course covering advanced 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. The course requires an extensive laboratory experience. A student fee is charged. Prerequisite: EET1141C
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=2.00

**EET2326C ELECTRONIC COMMUNICATIONS (4)**
Basic electronic communications systems, RF amplifiers and oscillators, amplitude modulation, single side band modulation, frequency and phase modulation, pulse modulation, demodulation, and digital communication methods. Extensive laboratory experience. Prerequisite: EET1141C
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=2.00

**EET2355C DATA COMMUNICATIONS (3)**
The student will study data communications systems including pulse amplitude, pulse width modulation and RS-232, RS-422, IEEE-488. Descriptions of BISYNC, HDLC and local area networks will be include UART and MODEM implementation.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**EET2358C ADVANCED COMMUNICATION TECHNOLOGY (3)**
This is an advanced course in telecommunication technology, with topics covering analog and digital communication, switching systems, Digital Prerequisite: EET2142C EET2355C
Pre or Corequisite: EET2326C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

**EEX3011 INTRODUCTION TO EXCEPTIONAL STUDENT (3)**
This course will focus on the characteristics and needs of students with disabilities. Course content will include the different types of programs and services that make up exceptional student education (ESE) and the history on how they came to exist. The Introduction to Exceptional Student Education course will serve as the foundation for the development of a personal and professional understanding and philosophy of ESE. Pre or Corequisite: EDF1005 EDF2085 EME2040
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

**EEX3094 NATURE & NEEDS OF THE AUTISM SPECTR (3)**
This is an overview course examining issues in providing educational services to individuals with Autism Spectrum Disorder Students (ASD). Emphasis will be placed on definitions and concepts, classification, prevalence, behavioral characteristics, communication, intervention strategies, classroom technology, multicultural
issues, and family involvement. Service delivery systems will be reviewed and current trends discussed. 10 school-based hours Prerequisite: EEX3011
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

EEX3103 TEACH K-12 STUDENTS WITH LANG AND C (3)
This course is designed to introduce knowledge and skills for teaching students with language and communication disorders in a variety of settings and inclusive classrooms. This course covers language and communication behaviors of children with specific exceptionalities and emphasizes research-based instructional strategies for facilitating and improving communication skills in a variety of contexts. It includes an understanding of the connection between language and literacy, language development, language disorders and characteristics, and intervention strategies. It also includes exploration of adaptive and assistive communication devices. Prerequisite: EEX3011
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EEX3280 TRANSITION PLANNING FOR STUDENTS WI (2)
This course is designed for students enrolled in the Bachelor of Science Degree program in Teacher Education. This is an overview course examining issues related to transition planning for secondary (high school) exceptional education students. Emphasis will placed on data collection, assessments, self advocacy and adult services. Federal requirements for the development of the Transition Individualized Education Plan (TIEP) will be reviewed and transition process from school to post school will be covered. Prerequisite: EEX3011
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EEX3601 POSITIVE BEHAVIORAL SUPPORT (3)
This is an overview course examining issues related to positive behavioral supports for exception 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. Prerequisite: EEX3011
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

EEX4293 ASSESSMENT & STRATEGIES IN EXCEPTIO (3)
This course introduces and familiarizes students with formal and informal evaluation techniques and materials for the educational assessment of exceptional learners, including those from diverse linguistic backgrounds, in a variety of settings and inclusive environments. Prerequisite: EDF3280
EDF4430 EEX3011
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EEX4843 TEACHING EXCEPTIONAL LEARNERS PRACT (3)
This course includes characteristics and educational needs of all types of exceptional learners. It is designed to prepare pre-professional educators for the student teaching internship. Pre-professional educators work directly with classroom teachers and have opportunity to teach both large and small group activities. This course is designed to develop the competencies relative to program planning, instruction, daily scheduling, record keeping, evaluation, classroom management, reporting to parents, professional organizations and teacher ethics. Students spend a minimum of 50 school-based hours in the classroom. Pre or Corequisite: RED4519
TSL4081
Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=39.75

EEX4945 STUDENT TEACHING INTERNSHIP IN ESE (9)
This course is designed for students enrolled in the Bachelor of Science Degree program in Teacher Education. This 10-credit course requires a candidate to demonstrate and apply teaching competencies during an internship in a public school approved by the department. A minimum of 35 contact hours per week for 12 weeks are required for internship. Eight hours of seminar accompanies this course. The purpose of the student teaching internship is for the intern to apply and integrate teaching competencies and responsibilities for teaching students with disabilities in a public school setting. The intern
will incrementally assume all duties of the mentor teacher in the areas of planning, instruction, management, collaboration and other essential classroom activities.

Lec Hrs=12 Lab Hrs=0 Oth Hrs=0 Fees=39.75

**EGS1001 INTRODUCTION TO ENGINEERING (3)**

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

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.00

*This course can be used for the AA degree.

**EGS2949 CO OP WORK EXPERIENCE (3)**

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

Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=39.00

**EME2040 INTRODUCTION TO EDUCATIONAL TECHNOL (3)**

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. *This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.00

**EMSI119 EMERGENCY MEDICAL TECHNICIAN BASIC (6)**

This course is designed to prepare the basic emergency medical technician in accord with U. S. Dept. of Transportation curriculum and Florida State EMS guidelines includes an introductory survey of emergency medical services including medical legal/ethical aspects, role of the EMT, patient assessment, care of wounds and fractures, airway maintenance, medical and environmental emergencies, patient transportation, emergency, childbirth, basic extrication. Successful completion of EMS1119, EMS1119L. EMS1411 and EMS1421 provide eligibility for Florida State EMT Certification Examination. Admission to this course requires departmental approval. 96 hrs. Lec. Terms I, II, and III.

Lec Hrs=96 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**EMSI1419L EMERGENCY MEDICAL TECHNICIAN SKILLS (1)**

Lab practice and testing of basic emergency medical technician skills included in the Department of Transportation EMT ambulance curriculum and Florida State EMS guidelines. Skills include CPR at AHA basic rescuer level, patient assessment, triage, airway maintenance, bandaging, splinting, mast suit application, emergency childbirth, and basic extrication. Successful completion of corequisites EMS1119, EMS1411, and EMS1421 leads to eligibility to take Florida State EMT Certification Examination. Health and accident insurance is recommended. 32 hrs. lab/ Terms I, II, and III.

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=55.00

**EMSI381 EMT RECERTIFICATION (1)**

This course is designed to review the basic knowledge and skills of emergency care, and to introduce the student to current methods use of new equipment and changes in medico legal aspects of emergency medical care. Successful completion of this course with a grade "C" or higher leads to Florida State Recertification as an EMT. This course may also be used by those who wish to prepare for the Florida State EMT Certification Examination. 24 hr. lec 8 hr. lab Term I, II, and III.

Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=33.00

**EMSI381L EMT RECERTIFICATION LAB (1)**

Application of skills and procedures involved in the U. S. Department of Transportation's Emergency Medical Technician Refresher Course.

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=33.00

**EMSI411 EMERGENCY MEDICAL TECHNICIAN (EMT) (1)**

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. Successful completion of EMS1119, 1119L, 1411 and 1421 provide eligibility for Florida State EMT Certification Examination. Health and accident insurance recommended. Liability insurance required.

Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=98.18

EMS1421 EMERGENCY MEDICAL TECHNICIAN (EMT) (2)
Practical application of (EMT) emergency medical technician clinical knowledge and skills under the professional supervision in the prehospital or field setting. Provides for observation and patient care experiences in EMS rescue vehicles. Course emphasizes the development of student skill in recognition of signs & symptoms of illness and injuries and in the proper procedures of emergency care. Successful completion of EMS1119, 1119L, 1411 and 1421 provides eligibility for Florida State EMT Certification Examination. Health and accident insurance recommended. Liability insurance required.

Lec Hrs=0 Lab Hrs=0 Oth Hrs=48 Fees=61.18

EMS2010 BODY SYSTEMS FOR THE PARAMEDIC (3)
This course presents basic information of the structure and function of the human body. The general concepts of anatomy and physiology for the assessment and management of emergency patients by the paramedic in the prehospital field area will be emphasized. The interaction of the body systems as they maintain homeostasis with particular attention placed on the nervous, cardiovascular and respiratory systems will be covered. United States Department of Transportation (USDOT) National Standard Paramedic Curriculum anatomy and physiology objectives will be included.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EMS2311 EMT LEADERSHIP (2)
Introduces the student to professional issues in EMS through special projects. Prerequisite: EMT and paramedic certificate courses. 32 hrs. Lec.

Term I. (Term I only) Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EMS2391 PARAMEDIC REVIEW RECERTIFICATION (2)
This course is based on the department of transportation's (DOT), paramedic refresher training course and is designed to review and update the graduate in the delivery of emergency medical services. Successful completion of the course with a grade of "C" or higher provides eligibility for State of Florida Paramedic Recertification.

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EMS2391L PARAMEDIC REVIEW RECERTIFICATION LA (1)
Application of skills and procedures involved in the Department of Transportation's Paramedic Refresher Course.

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=33.00

EMS2631 PARAMEDIC SCIENCE I (3)
Topics deal with EMS systems, Paramedic role and responsibilities, Paramedic well-being, injury, and disease prevention. Legal aspects, ethics, therapeutic communications, life span development, medical terminology, patient documentation including web based computer recording is covered. Systems as they maintain homeostasis with Didactic aspects of EMS/ambulance operations, Multiple Incident Command (MIC), rescue awareness and operations, hazardous materials incidents and crime scene awareness is presented. Basic math computation for medication administration is introduced. Material includes 1998 U. S. Department of Transportation, (DOT), National Paramedic curriculum objectives for Module 1, Units 1-5, 9, 10, Module 3, Unit 6, and Module 8. Pre or Corequisite: EMS2010 EMS2631L EMS2650

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EMS2631L PARAMEDIC SCIENCE I LAB. (1)
Review of basic life support skills required for advanced level life support skills practiced by the Paramedic. Additional skills include those contained in the latest Department of Transportation (DOT) National Paramedic
Curriculum and include prep topics related to Paramedic well-being, injury prevention, ambulance operations, Medical Incident Command (MCI), Haz-Mat and crime scene awareness. The student is expected to demonstrate basic level skill proficiency in patient care scenarios appropriate for beginning Paramedic practice. Corequisite: EMS2010 EMS2631 EMS2650
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=48.00

EMS2632 PARAMEDIC SCIENCE II (3)
Topics include general principles of pathophysiology, pharmacology, venous access and medication administration. Patient Assessment including history taking, techniques of physical examination, assessment procedures, clinical decision making, and radio communications are included. Material includes 1998 U. S. Department of Transportation, (DOT), National Paramedic Curriculum objectives for Module 1, Units 6,7,8 and Module 3, Units 1-5. Prerequisite: EMS2010 EMS2631 EMS2631L EMS2650
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EMS2632L PARAMEDIC SCIENCE II LAB. (I)
Skills Lab related to pharmacology, venous access and medication administration. Patient Assessment skills including history taking, techniques of physical examination, assessment procedures, clinical decision making, and radio communications are included. Other topics include Airway Management/Ventilation and cardiology. Material includes skills in the U. S. Department of Transportation, (DOT), National Paramedic Curriculum objectives for Module 1, Units 6,7,8 and Module 3, Units 1-5. Prerequisite: EMS2010 EMS2631 EMS2631L EMS2650
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=56.00

EMS2633 PARAMEDIC SCIENCE II - CARDIO-RESPI (3)
Topics deal with Airway Management and ventilation. Selected units from Medical Emergencies are Pulmonary conditions, and Cardiology to include an introduction to 12 Lead Interpretation and the prehospital management of acute myocardial infarction. Material covers 1998 U. S. Department of Transportation, (DOT), National Paramedic Curriculum objectives for Module 2, and Module 5, Units 1,2. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EMS2634 PARAMEDIC SCIENCE III - TRAUMA (3)
Topics deal with Trauma patient care including trauma systems/mechanisms of injury, hemorrhage and shock, of soft tissue trauma, and burns. Trauma of the head and facial area, spinal, thoracic, abdominal and musculoskeletal system is also covered. Material includes 1998 U. S. Department of Transportation, (DOT), National Paramedic Curriculum objectives for Module 4. Prerequisite: EMS2632 EMS2632L EMS2633 EMS2641 EMS2651
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EMS2634L PARAMEDIC SCIENCE III - TRAUMA LAB. (I)
Skills lab dealing with topics of trauma care, medical emergencies, and special care considerations related to obstetrics, neonatology, pediatrics, geriatrics, abuse and assault, patients, with special challenges and acute interventions for the chronic care patient. Material includes U. S. Department of Transportation (DOT), National Paramedic Curriculum objectives for Module 4, and Module 5, Units 3-14 and Module 6, Units 1-6. Prerequisite: EMS2632 EMS2632L EMS2633 EMS2641 EMS2651
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=51.00

EMS2635 PARAMEDIC SCIENCE III - MEDICAL EME (3)
Topics include Medical Emergencies related to neurology, endocrinology, allergies and anaphylaxis, gastroenterology, renal/urology, toxicology, hematology, environmental conditions, infectious and communicable diseases, behavioral and psychiatric disorders, gynecology, and obstetrics. Special Considerations related to neonatology, pediatrics, geriatrics, abuse and assault, patients with special challenges and acute interventions for the chronic care patient are also included. Material includes U. S. Department of Transportation, (DOT), National Paramedic Curriculum objectives for Module 5, Units 3-14 and Module 6, Units 1-6. Prerequisite: EMS2632 EMS2632L EMS2633 EMS2641 EMS2651
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
EMS2636 PARAMEDIC SCIENCE IV (3)
Topics include EMS Assessment Based Management, Continuation of 12 Lead ECG material, and didactic information for certification in Pediatric care, Advanced Life Support, (ACLS), Emergency Management of Acute Stroke, Prehospital Management of Traumatic Brain Injury and Trauma Life Support. Information on the EMS employment process is completed. Material includes U. S. Department of Transportation, (DOT), National Paramedic Curriculum objectives for Module 7. Prerequisite: EMS2634 EMS2634L EMS2635 EMS2642 EMS2652
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EMS2636L PARAMEDIC SCIENCE IV LAB. (1)
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. Prerequisite: EMS2634 EMS2634L EMS2635 EMS2642 EMS2652
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=92. 00

EMS2641 PARAMEDIC SCIENCE - HOSPITAL CLINIC (1)
First of three hospital courses stressing Advanced Life Support (ALS) skills for the paramedic student. Provides for directed supervised experiences in local hospitals. Clinical experiences with patients having Medical and Trauma Emergencies is stressed. Special patients of interest include OB-GYN, neonates, pediatric, psychiatric, geriatric, and patients with special challenges. Data recording of skill competencies on web based computer system is required. Health and Liability insurance required. Prerequisite: EMS2632 EMS2632L EMS2633 EMS2641 EMS2651
Lec Hrs=0 Lab Hrs=0 Oth Hrs=42 Fees=100. 18

EMS2643 PARAMEDIC SCIENCE - HOSPITAL CLINIC (2)
Last hospital courses involving patient care in a variety of emergency and health care agency sites Clinical experiences with patients of all age groups and medical/traumatic conditions is continued. Data recording of skill competencies on web based computer system is required. Health and Liability insurance required. Health and Liability insurance required. Prerequisite: EMS2634 EMS2634L EMS2635 EMS2642 EMS2652
Lec Hrs=0 Lab Hrs=0 Oth Hrs=72 Fees=105. 18

EMS2650 PARAMEDIC SCIENCE I FIELD (1)
First of four field courses dealing with the application of didactic material in the rescue field. Provides for directed, supervised experiences on EMS Advanced Life Support (ALS) vehicles. Emphasis on clinical activities and observations related to the US Department of Transportation (DOT), National Paramedic Curriculum, Module 1 and 8. Activities limited to practice of basic life support skills, assisting as a member of the EMS team and observation of paramedic level skills and activities. Documentation of patient care observations and patient care experiences using web based data collection system is required. Student health, accident and liability insurance is required. Corequisite: EMS2610 EMS2631 EMS2632L EMS2633 EMS2651
Lec Hrs=0 Lab Hrs=0 Oth Hrs=42 Fees=87. 18

EMS2651 PARAMEDIC SCIENCE II FIELD (3)
Second of four field courses that provides for directed, supervised experiences on EMS
Advanced Life Support (ALS) vehicles. Emphasis on clinical activities related to physical assessment with emphasis on patients with Cardio-Respiratory problems. Invasive procedures for IV therapy and medication administration are introduced. Data recording of skill competencies on web based computer system is required. Health and Liability insurance required. Prerequisite: EMS2010 EMS2631 EMS2631L EMS2650 Lec Hrs=0 Lab Hrs=0 Oth Hrs=84 Fees=61.18

EMS2652 PARAMEDIC SCIENCE III FIELD (3)
Third of four field courses stressing continuation of Advanced Life Support Skills for the Paramedic student. Provides for directed, supervised experiences on Advanced Life Support (ALS) vehicles. Emphasis on clinical activities related to trauma care, medical emergencies, obstetrics, pediatrics, geriatrics and specialty areas. Health and Liability insurance required. Lec Hrs=0 Lab Hrs=0 Oth Hrs=84 Fees=61.18

EMS2653 PARAMEDIC SCIENCE IV FIELD INTERNSH (4)
Final field course where student serves as team leader on EMS calls under supervision of EMS agency preceptor. Provides for directed, supervised experiences on Advanced Life Support (ALS) vehicles with increasing responsibility for the management of the EMS response. Health and Liability insurance required. Prerequisite: EMS2632 EMS2632L EMS2633 EMS2641 Lec Hrs=0 Lab Hrs=0 Oth Hrs=96 Fees=11.00

EMS2850 PARAMEDIC CURRICULUM BRIDGE (4)
This course provides a bridge for the 1998 DOT Paramedic Curriculum. Topics include emergency care coverage for heart attack and stroke victims, enhanced 12 lead interpretation, use of thrombolytics, and inclusion/exclusion criteria for thrombolytic therapy. In addition, this course includes a number of sections not covered or briefly covered in 1985 DOT National Paramedic Curriculum. These specific topics include the well being of the paramedic, injury prevention, therapeutic communications, life-span development, general principles of pathophysiology, clinical decision making, hematology, abuse and neglect, patients with special challenges, acute interventions for the home health-care, assessment based management, and crime scene awareness. Material includes 1998 U. S. Department of Transportation (DOT), National Paramedic Curriculum objectives for Module 1, Units 2,3,6,9, and 10, Module 3, Unit 4, Module 5, Units 2 and 9, Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ENC0015 DEVELOPMENTAL WRITING I (4)
This course provides an overview of the fundamentals of grammar, mechanics, usage, sentence structure, and paragraph development. With a D or an F, a student must repeat the course. Credit for this course may not be used to meet degree requirements. Corequisite: ENC0015L. Students must complete the lab requirement to receive credit for ENC0015. Corequisite: ENC0015L Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ENC0015L DEVELOPMENTAL WRITING I LAB (0)
A laboratory component that will supplement classroom instruction in ENC0015. Instruction focuses on the individual needs of the student. Students will have individualized prescriptions depending on the results of the diagnostic test. Students must pass a series of competency-based tests to receive credit for ENC0015. Pre or Corequisite: ENC0015 Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=25.00

ENC0025 DEVELOPMENTAL WRITING II (4)
A refinement of grammatical, mechanical, and usage principles including an overview of the strategies of paragraph and essay development. With a "D" or an "F", a student must repeat the course. Corequisite: ENC0025L. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ENC0025L DEVELOPMENTAL WRITING II LAB (0)
A laboratory component that will supplements classroom instruction in ENC0025. Instruction focuses on the individual needs of the student. Students will have an individualized prescription depending on the results of the diagnostic test.
and must complete the lab requirement to receive credit in ENC0025. Prerequisite: ENC0025
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=25.00

ENC1101 COMPOSITION I (3)
A university parallel course in which the student writes expository themes in various modes. Research methods and library skills are introduced and a documented paper is required. Each student is encouraged to use the writing lab to strengthen writing skills. Placement in ENC 1101 is determined by both standard and departmental assessment tests. A student must earn a grade of "C" or higher to meet the requirements of the Gordon rule.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=20.00
This course can be used for the AA degree.

ENC1102 COMPOSITION II (3)
Composition II is designed to further develop a student's composition skills by building on the rhetorical modes/strategies learned in ENC 1101. The course requires students to observe the conventions of Standard American English and create documented essays, demonstrating the student's ability to think critically and write analytically. Selected readings supplement the course and provide topics for discussion and written assignments. Students use library research methods for primary and secondary sources to produce MLA style-documented and well argued essays and research paper. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule. Prerequisite: ENC1101 This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ENC1905A INDEPENDENT DIRECTED WRITING (1)
An independent study for students who need to write 1,000 words to complete their writing requirement.
Lec Hrs=8 Lab Hrs=8 Oth Hrs=0 Fees=0.00

ENC1905B INDEPENDENT DIRECTED WRITING (1)
An independent study for students who need to write 2,000 words to complete their writing requirement.
Lec Hrs=8 Lab Hrs=8 Oth Hrs=0 Fees=0.00

ENC2210 PROFESSIONAL AND TECHNICAL WRITING (3)
A composition course focusing on writing for business, science, and technology. Assignments include letters, memos, resumes, reports, proposals, an oral presentation, and the use of graphics. Students use a variety of research and investigative techniques to produce documented papers on science, business or technological subjects. Students must pass with a minimum of "C" or higher to meet the requirements of the Gordon Rule. Prerequisite: ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

ENG2101 THE FILM AS LITERATURE (3)
Focuses on the relationships of two art forms—literature and film—and pays particular attention to how film has evolved as an art form and the ways which literature and its elements have influenced film. Also examines uses of literary techniques and the ways they have been adapted to film. Selected novels, short stories, plays, essays and/or memoirs may also be read as a means of comparing film and literature. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ENL2012 BRITISH LITERATURE TO 1798 (3)
Traces the development of the thematic, linguistic, and literary characteristics of British literature up to the 18th century. Emphasis will be placed on Chaucer, Shakespeare, Milton, Swift, and authors that reflect the changing literary canon. Prerequisite: Eligibility for ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

ENL2022 BRITISH LITERATURE SINCE 1798 (3)
Students will be introduced to works that represent the diverse literature of British literature published since 1798 to the present. Texts may be selected from major authors such as Amis, Austen, Blake, the Brontës, the Brownings, Byatt, Coleridge, Darwin, Dickens, Elliot, Ishiguro, Marx, Pinter, Tennyson, Wollstonecraft, Wordsworth, Byatt, Rushdie or Achebe. Upon successful completion of the course, students will understand the significant concepts, contexts,
movements, figures, and works of British Literature since 1798 to the present.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

ENL2330 INTRODUCTION TO SHAKESPEARE (3)
This course introduces students to the background of Shakespeare's life and work. Shakespeare's sonnets or narrative poems and plays are presented and the structure, content, and vision of Shakespearean histories, comedies, tragedies, and romances are studied. The course offers an opportunity to reinforce critical reading, writing, and research skills with regard to an iconic writer of western literature. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

ENY1001 BUGS AND PEOPLE (3)
A survey course in entomology for non-majors. The focus will be on both beneficial and detrimental impacts of insects and related arthropods and their role in the environment. Interactions with man, such as insects as disease vectors, agricultural pests, urban pests, indicators of environmental health, pollination and forensic crime-solving tools will be given emphasis. Both current and historical events and their impacts will be examined. The students will be given a non-anthropogenic view and expand their knowledge about the abundance and diversity of the largest group of animals on the Earth. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EPI0001 CLASSROOM MANAGEMENT (3)
This course prepares the participant to set up a classroom, establish classroom policies and procedures, create objective-based lesson plans, utilize various styles of presentations, employ varied teaching strategies including technology infused instruction, develop and administer various forms of assessment, integrate Sunshine State standards into lesson development, establish and maintain cooperative relations with parents, and research professional literature to seek best practices and to hone the craft of effective instruction. A major focus is the ethical and legal obligations of the teaching profession. Participant will build a developmental assessment and professional portfolio demonstrating mastery of competencies.
Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EPI0002 INSTRUCTIONAL STRATEGIES (3)
This course prepares the participant to become proficient in the application of a variety of instructional strategies based on knowledge of learning styles, co- operational and collaborative group activities, accommodation for exceptional students, and to develop effective lesson plans that infuse technology.
Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EPI0003 TECHNOLOGY (3)
The course prepares the participant to employ technology as an integral part of the teaching and learning process. Instruction is provided in commonly used software suites and on the Internet. The use of blended learning to enrich and engage students and increase their technology skills is a major emphasis. Copyright and fair use guidelines are reinforced.
Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EPI0004 THE TEACHING AND LEARNING PROCESS (3)
This course provides the participant with a foundation in various learning theories as applied in the instructional process. Standardized testing interpretation and use of results is stressed. Student characteristics such as exceptionalities, motivation, persistence, and second language acquisition will be addressed.
Lec Hrs=40 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EPI0010 FOUNDATIONS OF RESEARCH-BASED PRACT (3)
This module provides substantive knowledge of language structure and function and cognition of phonemic awareness, phonics, fluency, and comprehension. Further, it provides knowledge of the integration of the reading components. Instruction in this module is grounded in scientifically-based reading research as a mechanism to inform instructional practice.
Lec Hrs=45 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

EPI0020 THE TEACHING PROFESSION (2)
This course provides the foundation for becoming a productive member of the teaching profession. The participants will gain understanding of the organization and administration of the public school, the laws governing teachers, the code of ethics, and the purpose of schools. This course develops a professional perspective and creates a sense of grounding in the profession of teaching. Corequisite: EPI0940
Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EPI0030 DIVERSITY IN THE CLASSROOM (2)
This course provides the participant with an understanding of the variety of backgrounds and cultures that may be found in a typical classroom. The participant will gain a broader view of the social aspects of diversity and reevaluate personal beliefs and prejudices that may adversely affect the learning process. Corequisite: EPI0945
Lec Hrs=30 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EPI0940 FIELD EXPERIENCE (1)
This course is designed to provide the opportunity to the student with the experience of observing, interacting and working with a school population. Corequisite: EPI0020
Lec Hrs=15 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EPI0945 FIELD EXPERIENCE (1)
This course provides the opportunity to gain insight into the instructional process by completing 15 hours of field experience in public, charter, or private schools. Cohorts will meet together to discuss these experiences and to relate them to their observations of students as well as student behaviors and interactions in the schools. Corequisite: EPI0030
Lec Hrs=15 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ESC4074 WEATHER AND CLIMATE (3)
This course provides an introduction to general meteorology and atmospheric sciences. 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 formation. Finally, climatologic concepts will be explored. This course maintains scientific integrity and addresses technologies used in both meteorological and climatic studies. Pre or Corequisite: MAC1105
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ETC1250C MATERIALS AND PROCESS (3)
Introduces the materials and process commonly used in building construction. Provides background relating to physical properties, sources and costs. Includes a study of standard manufacturing processes and recent methods of application; and ASTM procedures for testing concrete and steel, soils, and other building materials.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

ETD1320 BASIC CAD (3)
First course in computer aided design (CAD), lab work using AutoCAD software. Topics include fundamentals of DOS, AutoCAD command structure, setting units and limits, drafting primitives, layering, use of editing tools; grid, snap, and axis commands. Assignments requiring extensive use of the CAD lab. Extra lab hours are available.
Lec Hrs=16 Lab Hrs=48 Oth Hrs=0 Fees=49.00

ETD2350C ADVANCED CAD (3)
Additional topics in AutoCAD. These 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. Prerequisite: ETD1320
Lec Hrs=16 Lab Hrs=48 Oth Hrs=0 Fees=0.00

ETII110C INTRODUCTION TO QUALITY ASSURANCE (3)
This course defines the role of quality in an industrial environment. Topics include the use of quality management techniques and quality philosophies, process development, techniques used for evaluation, approaches used on continuous operations, methods used to control quality, and the International Organization for Standardization (ISO) series of standards. The responsibility of quality assurance during the engineering, manufacturing, and marketing of a product is also covered.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**ETI1420 PROCESSES AND MATERIALS (3)**
This course provides coverage of the characteristics, fundamentals, and manufacturing properties of materials, including metal alloys, polymers, ceramics, and composites. The metal-casting processes and the shaping and forming processes are also covered along with the machines needed for manufacturing.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**ETI1701 SAFETY (3)**
This course focuses on the theories and principles of occupational safety and health in a practical and useful real world job related setting. The major topics include the Occupational Safety and Health Administration (OSHA) compliance, safety standards, code enforcement, ergonomic hazards, mechanical hazards, falling, lifting, electrical hazards, fire hazards, industrial hygiene, radiation, noise, emergencies, and environmental safety.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**ETM1010C MEASUREMENT AND INSTRUMENTATION (3)**
This course provides the basic foundation for both mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, gages, and other types of measuring equipment. The course will also introduce the student to the basic measurement techniques employing electronic test equipment including the operation and usage of digital multimeters, function generators, and oscilloscopes.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**ETP2402C INTRODUCTION TO SOLAR PHOTOVOLTAIC (3)**
This course delivers an introduction to background essential theory, principles, and future of distributive energy technology. It focuses on solar/photovoltaic systems work and integrate with the electrical grid. This course is the first of a two-part series (precursor to the installation course EET2551C) that will prepare the student for the North American Board of Certified Energy Practitioners (NABCEP) certification.
Lec Hrs=32 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**ETP2410C INSTALLATION OF SOLAR PHOTOVOLTAIC (3)**
This course covers the design and installation of photovoltaic systems. It is the second course in a two-part series. (Follow-up to the Introduction to PV Systems EET 2550) which provides all the content necessary to prepare the student for the North American Board of Certified Energy Practitioners (NABCEP) certification. Prerequisite: ETP2402C
Lec Hrs=32 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**ETS224C FIBER OPTIC COMMUNICATIONS (3)**
The study of 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. Extensive lab experience. Prerequisite: EET2142C
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**ETS2436C BIOMEDICAL INSTRUMENTATION I (3)**
Students will acquire proficiency in biomedical equipment maintenance through classroom and laboratory environment and will gain familiarity with and learn to evaluate, troubleshoot, test, and repair various types of biomedical equipment. Students will also learn to function in a hospital environment through an internship in the biomedical department of a participating hospital or biomedical equipment company. Prerequisite: CET1117C EET2142C HSC1531
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=5.00

**ETS2438C ADVANCED BIOMEDICAL INSTRUMENTATION (3)**
This course is intended to inform students about the theory and operation of instrumentation employed in the medical imaging field such as x-ray machines, CT scanners, Ultrasound, Nuclear Medicine and MRI. Prerequisite: ETS2436C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=2.00

**ETS2940 BIOMEDICAL ENGINEERING TECHNOLOGY I (4)**
The student will participate in a 13 weeks internship, 24 hours per week at a cooperating hospital. Topics will include orientation, orientation to biomedical engineering, medical instrumentation theory, safety standards, "hands-on" preventive maintenance procedures and equipment repair activities. The hospital biomedical engineering staff will directly supervise all aspects of this course. Prerequisite: CET1117C EET2142C HSC1531
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=63. 18

**EUH1000 SURVEY OF WESTERN CIVILIZATION I (3)**
Historical survey of Western culture from its roots in the ancient Near East to the beginning of the early modern period. Provides students with broad foundation of knowledge to understand socio-economic, intellectual, political and other cultural forces which have shaped (and continue to shape) Western civilization. Students will explore and apply general principles of historical methodology, and will develop their critical reading, thinking, and writing skills throughout the course. Geographic range: Near East, Mediterranean basin, Western Europe. Course themes comprise: development, expansion, and cultural influence of Greco-Roman civilization; encounters between diverse cultures over the several millennia which comprise Western Civilization, and the transformations which result from such encounters; the rise and fall of governmental, economic, and social systems; Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00  
*This course can be used for the AA degree.*

**EUH1001 SURVEY OF WESTERN CIVILIZATION II (3)**
This course surveys the major political, social, economic, cultural and international developments that shaped Western Civilization from the 17th century to the 21st century. Major topics include the evolution of the European nation-state, the emergence and consequences of modern political ideologies, and the roles of revolution, war, industrialization and technological innovations in an era that saw Europe achieve and then lose world hegemony. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00  
*This course can be used for the AA degree.*

**EUH2032 HISTORY OF THE HOLOCAUST (3)**
An examination of the historical origins, execution, and consequences of the Holocaust. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00  
*This course can be used for the AA degree.*

**EUH2052 HISTORY OF SPAIN (3)**
This course will examine Spain's historical development from prehistoric times to the present. Particular emphasis is placed on tracing the effects upon modern Spain of the major events in the nation's history, as well as the impact on the country of historical phenomena such as the Renaissance, the Enlightenment, the Napoleonic Wars and industrialization. The last part of the course examines the Spanish Civil War, Francoism and the country's subsequent reemergence in the international community. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00  
*This course can be used for the AA degree.*

**EVR1009 ENVIRONMENTAL SCIENCE (3)**
Study of the physical environment, its relationship with the biosphere, and man's impact upon natural systems. Placement by Testing Department or Prerequisite: MAT0028  
*This course can be used for the AA degree.*

**EVR1858 ENVIRONMENTAL REGULATION (3)**
This course deals with the purpose of federal, state, and local environmental law and its impact on South Florida and the larger world community. Reason for protection of the environment, compliance with legislation, and the concept of due diligence are emphasized. Extensive use of the case studies approach will be used to illustrate the application of law. Placement by Testing Department. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00  

**EVR2930 ENVIRONMENTAL SCIENCE SEMINAR (1)**
Selected current topics in environmental science and related subjects. Placement by Testing Department. Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
EVR2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. 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.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EVS2005 WATER SUPPLY AND WASTE WATER DISPOS (3)
A single course covering the sources, treatment and distribution of potable water and the collection, treatment and disposal of wastewater. Field trips include inspection of local facilities.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

EVS2893C ENVIRONMENTAL SAMPLING AND ANALYSIS (5)
This course provides an introduction to EPA and DEP-approved methods for the collection and analysis of environmental samples. The laboratory is integrated with class theory. Topics include: sampling of water, soils, sediments and hazardous waste; application of field and laboratory-based analytical methods; documentation procedures; method validation including generation of precision, accuracy, and detection limits; writing comprehensive and project-specific quality assurance plans. Prerequisite: CHM1025 CHM1025L
Lec Hrs=48 Lab Hrs=64 Oth Hrs=0 Fees=0.00

FES2010 INTRODUCTION TO EMERGENCY MANAGEMENT (3)
A study of Emergency Management, including the current organizational structure/procedures of emergency management programs, the 4 phases of emergency management: mitigation, preparedness, response and recovery, and past and current emergency management systems.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP1000 INTRODUCTION TO FIRE SCIENCE (3)
This introductory course will examine the evolution of the modern fire department, chemistry and physics of fire, fire hazard properties of materials; combustion; theory of fire control; importance of fire protection; public fire defenses; and other materials pertinent to fire service.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP1505 FIRE PREVENTION PRACTICES (3)
Fundamentals of fire prevention are introduced with examination of fire causes and effects. The function of fire prevention bureaus, enabling legislation regulations and standards are discussed. Additional areas of study include the inspection process, fire code enforcement, local decisions, fire investigations, records and reports.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP1510 CODES AND STANDARDS (2)
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.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP1540 PRIVATE FIRE PROTECTION SYSTEMS 1 (3)
This course examines requirements for and testing of fire sprinkler and standpipe systems, chemical systems, detection and alarm systems.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP1740 FIRE SERVICE COURSE DELIVERY (3)
Study of 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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

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

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP1810 FIREFIGHTING TACTICS & STRATEGY (3)**
A study of tactical considerations and strategic options employed in the extinguishment of fires; pre-planning and company level field operations will be analyzed with application of course concepts. 3 hrs. lec.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP1830 INTRODUCTION TO HAZARDS (3)**
An in-depth study of the details and dynamics of natural and man-made hazards. Includes methods and means to measure, monitor and predict the physical impact of hazards on society. Special emphasis on hazards that impact Florida.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2111 FIRE CHEMISTRY (3)**
Study of the physical and chemical properties of matter, with a particular emphasis on hazardous materials, hydrocarbons, oxidation-reduction chemistry, and residuals of pyrolysis. Topics covered include atomic structure, the periodic table, chemical bonding, chemical measurement, stoichiometry, and the study of chemical properties according to group, class, and reactivity. Sample collection and analysis is included as a practical component of the course. Prerequisite: Municipal Fire Inspector Certification.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2120 FIRE SERVICE BUILDING CONSTRUCTION (3)**
Course examines objectives and criteria of South Florida building code requirements for various types of occupancies, classification by types of construction, building materials, fire resistant standards, egress, permits, inspections, and standards, and other pertinent material for building construction.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2301 FIRE HYDRAULICS (3)**
Study of the physical properties of water used in fire protection. Basic hydraulic measuring units, facts, theories and formulas for problem solving.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2302 FIRE APPARATUS AND PROCEDURES (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2401 HAZARDOUS MATERIALS I (3)**
Study of types of chemicals and processes, storage, and transportation of chemicals; hazards of radioactive materials; precautions to be taken in fire fighting involving hazardous materials; laws of federal, state and local levels pertaining to such materials.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2402 HAZARDOUS MATERIALS II (3)**
A continuation and expansion of FFP2401 to include radioactive materials, corrosives, pesticides, rocket propellants, and other related materials. Prerequisite: FFP2401
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2521 CONSTRUCTION DOCUMENTS AND PLANS RE (3)**
Students will review actual building plans and apply codes, standards and inspection techniques, to find errors and omissions, students shall make appropriate corrections according to the code, and with preferences identified.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2541 PRIVATE FIRE PROTECTION SYSTEMS II (3)**
This course is an in-depth discussion of pre-engineered and portable systems, extinguishing agents, inspection procedures for code compliance and enforcement, and alarm systems. Contemporary systems are examined through case studies. This course is part of the Fire Inspector II State Certification.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FFP2610 ORIGIN & CAUSE (3)**
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP2630 LATENT INVESTIGATION (3)
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. Prerequisite: FFP2120 FFP1505 FFP1510 FFP1540 FFP2521

Lec Hrs=40 Lab Hrs=4 Oth Hrs=0 Fees=0.00

FFP2670 LEGAL ISSUES FOR INVESTIGATORS (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP2706 PUBLIC INFORMATION OFFICER (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP2720 COMPANY OFFICER (3)
Study of superior subordinate relationships, motivation, leadership, morale, discipline, work planning and other supervisory responsibilities related to fire dept. operations.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP2741 FIRE SERVICE COURSE DESIGN (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

*This course can be used for the AA degree.*

FFP2770 ETHICAL AND LEGAL ISSUES FOR THE FI (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

*This course can be used for the AA degree.*

FFP2780 FIRE DEPARTMENT ADMINISTRATION (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

*This course can be used for the AA degree.*

FFP2800 EMERGENCY MANAGEMENT PUBLIC EDUCATI (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
FFP2811 FIREFIGHTING TACTICS & STRATEGY 2 (3)
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP2831 HAZARD PLANNING & MITIGATION (3)
An examination of how to develop programs that will reduce losses from future disasters, emergencies and other extreme events caused by natural and man-made hazards.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP2840 DISASTER RESPONSE & RECOVERY (3)
A study of how to develop programs designed to plan for and assist in disaster response efforts and disaster recovery efforts.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP2841 EMERGENCY PLANNING FOR BUSINESS & I (3)
A study of the contingency planning process of emergency/disaster preparedness in the corporate world, including a step-by-step approach to emergency planning, response and recovery for companies of all sizes.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FFP2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

FIL1100 SCREENWRITING 1 (3)
The course is a workshop in which students will develop their own original stories, while learning basic narrative structure for feature length screenplays. Student will also learn to break down and analyze popular screenplays. Prerequisite: ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

FIL1420C INTRODUCTION TO FILM PRODUCTION I (4)
Provides a basic understanding of digital film production technology, equipment operation, terminology, and techniques, as well basic industry positions, procedures and protocols in the production of several short narrative motion pictures. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=0.00

FIL1552C FILM EDITING (3)
Basic theory and practice of nonlinear editing for narrative motion pictures using industry motion picture editing software. This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=0.00

FIL2000 INTRODUCTION TO FILM STUDIES (3)
This course is designed to provide an introduction to film as an art form, cultural product and social artifact. It will include then understanding of basic analytical and technical forms, concepts, issues and development of critical skills. It will also include the history, development, theory and criticism of film art, as well as the basic principles of film making and film production. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FIL2432C FILM PRODUCTION II (4)
Building on the basic concepts of film production I, students continue to develop an understanding of professional digital film production with the addition of basic lighting and sound for cinematic storytelling. Industry positions, procedures and protocols will be emphasized during the production of several short narrative motion pictures. Prerequisite: FIL1420C FIL1552C
Lec Hrs=48 Lab Hrs=48 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.
FIN2791C MOTION PICTURE VISUAL POST PRODUCTI (3)
Basic theory and practice of computerized photo retouching, digital video compositing, and motion graphics for narrative motion pictures using industry standard imaging software such as Photoshop and AfterEffects. Prerequisite: FIL1552C
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

FIN1100 PERSONAL FINANCE (3)
This course provides a survey of the areas of personal economic problems with which all individuals must contend. Course content guides each person towards receiving favorable results in the following areas: buying on credit, borrowing money, using bank services, and investing savings; selecting from various types of insurance coverage; home ownership vs. renting; obtaining investment information, investing in stocks and bonds; income taxes; Social Security; Medicare, retirement planning and annuities; and estate planning, wills, and trusts.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

FIN2051 FINANCE OF INTERNATIONAL TRADE (3)
This course provides a general survey of international trade. Topics studied include transportation modes, cargo insurance and the various special terms of sale used in overseas transactions. Also covered are import/export, foreign exchange, pricing and quotations; import/export documentation and procedures; documentary credits, international payments and collections; bank financing sources for international trade and alternative financing techniques. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FIN3400 PRINCIPLES OF FINANCIAL MANAGEMENT (3)
This is an introductory course in managerial finance in which the student should attain a clear, basic understanding of the fundamentals of finance and their associations to the decision-making framework faced by a financial manager. Topics include time value of money risk and rates of return, asset valuation, financial planning and forecasting, working capital management and international financial management.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FIN4460 FINANCIAL STATEMENT ANALYSIS (3)
This course explores methods of deriving information from financial statements, including both published documents and privately prepared reports that would be of interest to lenders and investors. Extensive use is made of computer assisted financial planning and forecasting models.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

FRE1000 ELEMENTARY FRENCH CONVERSATION (3)
A custom made course for those residents in the community who require a cursory knowledge of French to help them communicate with French speaking people. One hour language laboratory weekly. Special Fee Charged. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=15.00

FRE1120 BEGINNING FRENCH I (4)
Fundamentals of speaking, listening-comprehension, reading, writing, and Francophone culture. Classroom practice and exercises supplemented by laboratory and/or multi-media designed to develop communicative competence and cultural sensitivity. Student expected to continue further implementation and expansion of their proficiencies in FRE 1121 and FRE 2220. Students are encouraged to study abroad. This course can be used for the AA degree.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00

FRE1121 BEGINNING FRENCH II (4)
Continuation of FRE 1120. Further development of the basic skills in speaking, listening-comprehension, reading, writing, and appreciation of Francophone culture. Classroom practice and exercises supplemented by laboratory and/or multi-media activities designed to develop and enhance communicative competence and cultural sensitivity. Skills and concepts are further polished in FRE 2220. Prerequisite: FRE1120 This course can be used for the AA degree.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00
**FRE1170 FRENCH STUDY TRAVEL (3)**
A course designed for students who wish to combine the study of French with subsequent travel to a French speaking region. Prerequisite: FRE1120 or FRE1000 or instructor's approval. Prerequisite: FRE1120
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

**FRE2220 INTERMEDIATE FRENCH I (4)**
Continuation of FRE 1121. Review of the most essential grammatical structures with an introduction of new grammatical and idiomatic material. Composition and readings in French prose and culture. Conversation at an easy and enjoyable pace. Upon successful completion of this course, the students should be able to demonstrate an understanding of the more complex concepts of the grammatical and idiomatic principles of French and write and speak properly within the limits of this course. In addition, the student must show proficiency in comprehending various cultural and literary reading selections in the original French with different levels of reading difficulty. Prerequisite: FRE1121
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00
This course can be used for the AA degree.

**FSS1203C QUANTITY OF FOOD PRODUCTION 1 (3)**
Students will acquire the fundamental concepts, skills and techniques involved in the management of resources, use of recipes, use and care of equipment, and evaluation of food products. Special emphasis is given to practical demonstrations in breakfast cookery, salads, dressings, cold sauces, sandwiches, and safety and sanitation principles. Students must successfully pass written and practical cooking examination covering a variety of techniques and procedures. Lec Hrs=40 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**FSS1240C CLASSICAL CUISINE (3)**
This course provides the professional culinary student with new menu items and terminology. It sets and applies standards to hot/cold hors d'oeuvres, appetizers, large and small dinner parties, and pastry products. The students observe preparation skills, write recipes, practice correct serving techniques, and taste the prepared food. Instructor's approval or Prerequisite: FSS1221C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

**FSS1246C BAKING AND PASTRIES I (3)**
Students will acquire knowledge of the composition and properties of baking ingredients. They will utilize the proper equipment and tools, and standardized recipes to prepare yeast breads, rolls, pastries, and cakes in the food service laboratory. The instructor will evaluate the products prepared based on established food service standards.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

**FSS1284 CATERING (3)**
This course provides a survey of catering operations. Topics covered include the preparation of a menu, estimating cost and food quantities, planning the room arrangement, the setup of buffet and service tables, and the performance of services. In addition, the allocation of time to prepare, transport, and setup the equipment and food for a catered affair are studied. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**FSS2204C QUANTITY OF FOOD PRODUCTION 2 (3)**
This course will enable students to learn and execute various methods preparing vegetable, starch, meat, fish, and poultry cookery, including the basic cooking techniques: sauteing, roasting, boiling, braising and frying.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

**FSS2205C QUANTITY OF FOOD PRODUCTION 3 (3)**
Students will focus on the knowledge and preparation of job descriptions. Students will utilize all commonly accepted methods of recruiting a successful staff. Menu selection, staffing, and balance will be studied. The course also emphasizes safety and sanitation procedures. Students will learn about common problems in hiring and supervising employees.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

**FSS2242C INTERNATIONAL CUISINE (3)**
This course covers international cookery as it applies to modern menu use and selection. It includes preparation of cold buffet, entree, dinner
accompaniment, and flambe dessert. The students observe preparation skills, write recipes, practice correct serving techniques, and taste the prepared food. Instructor’s approval or Prerequisite: FSS1240C.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0. 00

**FSS2247C BAKING AND PASTRIES_II (3)**
Students will continue to build knowledge of the composition and properties of baking ingredients. They will utilize the proper equipment and tools, and standardized recipes to prepare yeast breads, rolls, pastries, and cakes in the food service laboratory. The instructor will evaluate the products prepared based on established food service standards.
Lec Hrs=40 Lab Hrs=16 Oth Hrs=0 Fees=0. 00

**FSS2248C GARDE MANGER (3)**
Students will acquire knowledge and demonstrate skills in the cold foods area of the kitchen. The key topics will include sausages, pats, terrines, cured and smoked foods, cheese making, hors d'oeuvres, appetizers, condiments, garnishing and ice carving.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0. 00

**FSS2251 FOOD AND BEVERAGE MANAGEMENT (3)**
Covers the principles and procedures involved in an effective food and beverage control system, including standards determination, the operating budget, cost-volume-profit analysis, income and cost control, menu pricing, theft prevention, labor cost control, and computer applications.
Lec Hrs=40 Lab Hrs=16 Oth Hrs=0 Fees=0. 00

**FSS2500 FOOD SERVICE COSTING AND CONTROLS (3)**
This course provides a cost managing approach to the study of food and labor controls. Students examine the relationship of food and labor costs to selling price; cost control procedures for recipes and menus; pre-cost and pre-control techniques; the preparation and utilization of management reports. A review of mathematics and its application to practical problems is covered. Emphasis is placed on the utilization of controls as a tool of management.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**GEA2000 WORLD GEOGRAPHY (3)**
Regional geographical characteristics, area relationships and major regional internal as well as interactive problems will be analyzed. The theme of this course is to impart geographic knowledge at the world regional level, then explain how these factors create global contrasts. Special emphasis will be placed on how the world has become more interdependent as complex economic systems have evolved and become more specialized. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**GEA2030 GEOGRAPHY OF THE EASTERN WORLD (3)**
A regional survey of the human/cultural and physical/environmental aspects of the non-western world including the following regions: North Africa & SW Asia, Sub-Saharan Africa, South Asia, Southeast Asia, East Asia, and the Pacific Island Realm. The characteristics and special problems of each region will be analyzed from a geographical perspective in order to understand global diversity and the forces and issues that help shape the world.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

**GEA2040 GEOGRAPHY OF THE WESTERN WORLD (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

**GBE1011 INTRODUCTION TO BUSINESS (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

GEB2112 ENTREPRENEURSHIP (3)
This course presents a modern treatment of business. It explores start-up/buy-out, franchising, business plans, marketing plans, human resources, financial planning, legal forms, products/services, selling, advertising, management policies, accounting systems, tax issues, capital management, computers, risk management, and ethical issues.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
*This course can be used for the AA degree.*

GEB2430 BUSINESS ETHICS (1)
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. *This course can be used for the AA degree.*
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

GEB2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00
*This course can be used for the AA degree.*

GEB2955 INTERNATIONAL CURRENT BUSINESS PRAC (3)
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.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00
*This course can be used for the AA degree.*

GEB3213 BUSINESS WRITING (3)
This course focuses on techniques to improve writing skills. The course will use a workshop format that relies on writing assignments, discussions, and classroom activities. An emphasis on global business writing will be included.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

GEO1000 INTRODUCTION TO GEOGRAPHY (3)
This course is a study of the geographical patterns of both human and physical phenomenon and the interaction between humans and their environment. Through readings in the text and/or supplemental sources and via class lectures, activities and discussions analysis will target the earth's physical systems including landforms, hydrosphere, *This course can be used for the AA degree.*

and climates; human systems such as culture, population and economic/urban development; as well as and human impact on the world's natural resources. A student must earn a grade of "C" or higher to meet the requirements of the Gordon rule.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

GEO2200 PHYSICAL GEOGRAPHY (3)
This course serves as an introduction to the manner in which natural systems function at global and regional scales. The course uses a geographical perspective to analyze landforms, climate, the water cycle, and the biosphere, examining spatial relationships and regional variations and addressing spatial patterns of human activity as related to environmental phenomenon. *This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

GEO2370 CONSERVATION OF NATURAL RESOURCES (3)
A survey of the use and mismanagement of natural resources within the environment, including problems of development, pollution, biotic systems, population, resource depletion and technology. Special emphasis will be placed upon the spatial/geographical Manifestation of conservation issues.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

**GEO2420 INTRODUCTION TO HUMAN / CULTURAL GE (3)**
This course will introduce students to geographical concepts as applied in human/cultural issues and problems of the world today. Emphasis will be placed on tensions between globalization and human diversity. The systematic approach will offer theories and techniques developed by geographers that assist in understanding both human-cultural interaction and human-environmental interaction.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

**GER1000 ELEMENTARY GERMAN CONVERSATION (3)**
A custom made course for those residents in the community who require a cursory knowledge of German to help them communicate with German speaking people. One hour language laboratory weekly. Special fee charged.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=15. 00
This course can be used for the AA degree.

**GER1120 BEGINNING GERMAN I (4)**
Fundamentals of speaking, listening-comprehension, reading and writing in German. 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 GER2220. Prerequisite: GER1120
This course can be used for the AA degree.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15. 00

**GER1170 GERMAN STUDY TRAVEL (3)**
A course designed for students who wish to combine the study of German with subsequent travel to a German speaking region. Prerequisite: GER1120
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

**GER2220 INTERMEDIATE GERMAN I (4)**
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. Student are expected to further their skills by studying abroad. Prerequisite: GER1121
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

**GIS1030 REMOTE SENSING AND APPLICATIONS (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=15. 00
This course can be used for the AA degree.

**GIS1040C INTRODUCTION TO GEOGRAPHIC INFORMAT (4)**
The intent of this course is to provide the student with a detailed introduction in geographic information systems (GIS) and support this
information with laboratory activities. The course will cover all working knowledge of the theory aspects of geographic information systems including data collection, preprocessing, data management and data analysis as well as an introduction to the application of these systems. Prerequisite: knowledge of Windows operating system.

**GLY1001L EARTH SCIENCE LABORATORY (1)**

This course will have experiments and exercises that will be investigating the hydrosphere, lithosphere and atmosphere of earth. The earth will also be mapped and investigated as an object in space. At least 3 of the following five units will be covered:(1) Introduction to Laboratory Study*, (2) The Solid Earth*, (3) Earth's Waters, (4) Earth's atmospheres and (5) Mapping. A special fee will be charged. *These units must be covered. Pre or Corequisite: GLY1001

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=22. 00
This course can be used for the AA degree.

**GLY1010 PHYSICAL GEOLOGY (3)**

Study of geologic agents, minerals, rocks, structure, and land forms. The effects of geologic events upon life and human relations are discussed. Students registering in GLY1010 are strongly urged to register in the companion lab GYL1010L. Some senior institutions require a 4 credit geology course. Three hours weekly. Placement by Testing Department.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

**GLY1010L PHYSICAL GEOLOGY LABORATORY (1)**

Study of common rocks and minerals including their classification and origin and the interpretation of landforms through the study of geologic maps. One 2-hour laboratory weekly. Placement by Testing Department.

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=15. 00
This course can be used for the AA degree.

**GLY1100 HISTORICAL GEOLOGY (3)**

A study of the origin and evolution of the Earth and the history of life on our planet. The course encompasses the causes and effects geologic change and the evolution of life, and the role of plate tectonics on the geologic and biologic evolution of Earth. Emphasis is placed on how and why past geologic and biologic changes occurred. Interpretations of Earth's past history are also used to help explain current events and predict future trends. Field trips are optional.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.
GLY100L HISTORICAL GEOLOGY LABORATORY (1)
This course is utilizes activities to interpret the earth's geologic history and augments the topics covered in GLY-1100. These exercises include a review of rocks and minerals interpretation of maps and aerial photography using principles to determine the sequence geologic events, application of paleontologic data, interpretation of depositional environments, stragraphic correlation, interpreting surface and subsurface structure, and pale geographic exercises. Prerequisite: GLY1010
This course can be used for the AA degree.

Pre or Corequisite: GLY1100
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=3.00

GRA1110C APPLIED DESIGN 1 (3)
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. Prerequisite: ART1201C ART1300C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA1144C WEB PUBLISHING (3)
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. Prerequisite: PGY1801C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA1151C ILLUSTRATION DESIGN 1 (3)
This course addresses the concepts and techniques necessary to create computer-generated illustrations for use in print, web and multimedia applications. Students will work with software packages utilized by professional designers. Assignments include the creation of technical illustrations, business graphics (charts, maps, tables, and diagrams) and art for other applications. The class is portfolio driven, training students to follow a business process for analyzing client needs, conducting research and developing a concept for production within a budget.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA201C TYPOGRAPHIC DESIGN (3)
This course is an introduction to computerized typography. The emphasis is on the visual effects of type as a design and communication element. Students will form an understanding of the fundamental rules related to type design, such as kerning and leading. The primary focus of the instruction will be in how type is used in contemporary graphic design applications, but some practice in hand lettering will be included as well as a study of the how various type styles are designed. Also included is a study of font management, postscript, and handling of digital files. Students will solve a variety of problems commonly encountered in the production of a body of type for both print and electronic output. Prerequisite: ART1300C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA212C PUBLICATION DESIGN (3)
This course introduces the student to principles governing page layout and the design of publications. The industry standard software will be used for the production of professional looking publications which may include magazines, news- letters, 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.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA2152C ADVANCED DIGITAL IMAGE DESIGN (3)
This is an advanced level course where students will solve complex digital imaging, illustration and compositing problems that require both 2D and 3D special effects. Students will be introduced to the fundamentals of creating and animating 3D images using 3D animation and modeling software packages, including creating objects, building models, animating, creating a scene, applying textures and paint, setting lights and cameras and rendering the final animation. Projects will satisfy the current industry client base which demands that a graphic artist conceive a given graphic idea which can be produced in a variety of print outputs, as well as output for the Web, TV and multimedia. Prerequisite: GRA1151C PGY1801C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

GRA2157C ILLUSTRATION DESIGN II (3)
This advanced illustration class will expand the students' visual problem-solving vocabulary to include informational graphics, mapmaking and editorial illustration. Illustrations will use digital 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. Prerequisite: ART1201C ART1300C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA2171C BRAND AND AD DESIGN (3)
This course will introduce advertising and marketing principles. Students will apply design and technical skills introduced in foundation level classes. The focus will be on solving real-world advertising and promotional problems, carrying projects from initial concept to final presentation of the product. Projects will satisfy the current industry client base which demands that a graphic artist conceive a given graphic idea for production in a variety of print outputs, as well as output for the Web, TV and multimedia. The class is portfolio driven, training students to follow a business process for analyzing client needs, conducting research and developing a concept for production within a budget. Prerequisite: GRA1151C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA2180C APPLIED DESIGN II (3)
The student will apply all the knowledge acquired in previous courses to this portfolio building class. Projects will cover the full spectrum of graphic design jobs, including advertising, identity systems, packaging, 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 be 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. Prerequisite: GRA1110C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA2185C DESIGN PRODUCTION (3)
This course is an advanced level course that forms an integral part of the final skills needed to complete the Graphic Design Technology A. S. Degree requirements. It is intended to support the portfolio and internship courses by providing practice in advanced concept formulation and art direction strategies and practical experience in production of their portfolio at a service bureau. Prerequisite: GRA2121C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA2190C INTRODUCTION TO GRAPHIC DESIGN (3)
This course is an introduction to the theory, practice, materials, techniques, and production methods used in graphic arts, pointing out how various layout techniques lead to a printed piece. Intended for art majors who wish to pursue a BFA degree in graphic design or want to seek entry level employment. Prerequisite: ART1201C ART1300C
Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=40.00
This course can be used for the AA degree.
GRA2191C GRAPHIC DESIGN II (3)
Communication and creativity theory for graphic designers, featuring preparation of art for reproduction using the computer as a graphic design problem-solving tool, combining text, image and digital design. Intended for art majors who wish to pursue a BFA degree in Graphic Design or want to seek entry-level employment. Prerequisite: GRA2190C
Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=40.00

GRA2403 PRINCIPLES OF PROJECT MANAGEMENT (3)
Students in this course will gain a comprehensive understanding of the skills required of project managers. This includes software presentation training, instruction in monitoring and controlling projects, procurement planning techniques, and an introduction to using project management software.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

GRA2425C PORTFOLIO & BUSINESS OF DESIGN (4)
Students will collect their work into a print and web portfolio that represents their mastery of the skills and standards of the graphic design program. This capstone class will include business practices, ethics, contracts and copyright issues. Issues of sustainability and environmental sensitivity will be stressed. Prerequisite: GRA2160C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=56.00

GRA2754C WEB DESIGN II (3)
To extend 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. Prerequisite: GRA1144C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00

GRA2940C GRAPHIC DESIGN INTERNSHIP (3)
This course is a culmination of the Graphic Design two years A. S. Program. Students will learn the necessary business protocol and job interviewing skills that will place them in an internship situation. The intern will work in a studio setting, e.g., advertising agency, graphic design department of a large company, commercial printing business, etc. The experience will involve all duties usually associated with the current graphic design profession. Interns are expected to complete project assignments from start to finish with minimal guidance from the sponsoring entity/establishment. Prerequisite: GRA2181C
Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=55.00

HBR1120 BEGINNING HEBREW I (4)
Fundamental of speaking and understanding reading and writing. Classroom practice and exercises supplemented by language and laboratory sessions designed to develop confidence and a basic proficiency in Modern Hebrew. Student is expected to continue with HBR1121. Special Fee Charged. This course can be used for the AA degree.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00

HBR1121 BEGINNING HEBREW II (4)
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. Prerequisite: HBR1120
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00
This course can be used for the AA degree.

HBR2220 INTERMEDIATE HEBREW I (4)
HBR 2220 supplements the groundwork laid in HBR 1120 and HBR 1121. Classroom discussions and practice are supplemented by exercises and multi-media activities designed to develop and enhance communication and cultural awareness. Students will acquire a basic understanding of Hebrew syntax, grammar, and morphology, as well as an introduction to Hebrew literature of various eras. Prerequisite: HBR1121
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00
This course can be used for the AA degree.
HCP0001 HEALTH CAREERS CORE CURRICULUM (2)
The Health Careers Core Curriculum course presents basic knowledge & skills for students majoring in a health science degree program. The course introduces students to a health care delivery system, the health occupations, and teaches basic medical and employability skills.
Lec Hrs=45 Lab Hrs=30 Oth Hrs=0 Fees=100. 00

HFT1050 INTRODUCTION TO TOURISM INDUSTRIES (3)
This course provides a survey of the history, organization, problems, opportunities and future trends in the areas which comprise the travel and tourism industries. Emphasis is placed on the economic benefits and social implications of tourism. This course is beneficial to the purchaser of tourism services as well as the marketer. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HFT1210 SUPERVISORY DEVELOPMENT (3)
This course provides training on the art of supervising employees and the development of sound relations with other departments. It covers methods of controlling costs, development of cost consciousness, cost improvements, techniques in the supervision of employees, and developing sound relations with other departments. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HFT1941 OPERATIONS AND SERVICE PRACTICUM (3)
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. Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0. 00 This course can be used for the AA degree.

HFT2220 ORGANIZATION AND PERSONNEL MANAGEMENT (3)
This course covers the organization, supervision and direction of operations in the hospitality/restaurant/travel industries. It analyzes the internal organizational structure and its administrative roles and functions. The course considers techniques of employee training, promotions, job specifications, discipline and morale. The course borrows from the behavioral sciences by emphasizing the human dimensions of management.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00 This course can be used for the AA degree.

HFT2250 HOTEL MANAGEMENT (3)
This course provides a study of the growth and progress of the hotel industry and how hotels are developed, organized, financed and operated. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HFT2410 FRONT OFFICE SYSTEMS AND PROCEDURES (3)
This course provides basic training in front office procedures, and focuses on the rooms division of a hotel: front office, housekeeping, guest service, engineering, and security/loss prevention.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00 This course can be used for the AA degree.

HFT2460 FINANCIAL MANAGEMENT (3)
A study of accounting systems for the hospitality/restaurant/travel industries with emphasis on operating statistics and financial reports. The utilization of financial statements by management is studied.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HFT2500 MARKETING (3)
This course emphasizes how to sell and promote the services the hospitality/restaurant/travel industries offer guests. It covers the development of business through personal selling, media advertising and publicity. In addition, the operations of a sales and convention department are studied.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

**HFT2511 CONVENTION AND GROUP BUSINESS MARKETING (3)**
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

**HFT2600 HOSPITALITY LAW (3)**
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

**HFT2721 TRAVEL AGENCY MANAGEMENT & OPERATIONS (3)**
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

**HFT2730 TOUR PACKAGING (3)**
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**HFT2942 MANAGEMENT AND CONTROL PRACTICUM (3)**
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.

Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

**HFT2949 CO-OP WORK EXP (3)**
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by students and employer. Prerequisites: 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.

Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**HIM1000 INTRO TO HEALTH INFORMATION TECHNOLOGY (3)**
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, 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.

Prerequisite: HSC1531

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**HIM1100 HEALTH DATA CONCEPTS (3)**
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. Prerequisite: HIM1110L

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=3.00

HIM1110L HEALTH DATA CONCEPTS LAB (1)

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. Prerequisite: HIM1000

Corequisite: HIM1110

Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=43.00

HIM1253 CODING I (3)

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. Prerequisite: HIM1435 HIM1453

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=29.00

HIM1253L CODING I LAB (1)

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. Prerequisite: HIM1435 HIM1453

Corequisite: HIM1253

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

HIM1260 REIMBURSEMENT METHODOLOGY (2)

This course examines the complex financial systems within today's healthcare environment and provides an understanding of the basics of health insurance and public funded programs, managed care contracting and how services are paid. In addition to the step by step details about how each payment system functions, a brief historical review is also provided the student for a greater understanding of the impact has had on all stakeholders. This course will include a review of billing forms, different prospective payment systems and a discussion of claims management. Prerequisite: HIM1000 HIM1253 HIM1253L

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

HIM1300 HEALTHCARE DELIVERY SYSTEMS (2)

This fully online course is an introduction to the historical development, current structure, operation, financing, and future directions of the major components of the U. S. healthcare delivery system. A population perspective is used. Upon completion, students should be able to identify the major components, issues and trends in the U. S. healthcare delivery system. Prerequisite: BSC2085 BSC2085L

Corequisite: HIM1000 HIM1435

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

HIM1430 SURVEY OF HUMAN STRUCTURE AND DISEA (3)

This is the first of a 2 course series that will be a survey of the structure, function, and disease processes of the human body along with the current diagnostic and clinical treatment modalities. This course is geared to the health information technology student who will be utilizing this knowledge to code and classification diagnoses, procedures, diagnostic services rendered to patients in the healthcare environment. In Part I of this course series, the student will learn about the basic structure and
functions of the cell, tissues, and systems, basic diagnostic testing and pharmacological treatment for conditions found in the following systems: Skeletal, Muscular, Integumentary, and Nervous. Students will be introduced to basic pharmacology throughout the course and will learn the 50 most commonly prescribed. Prerequisite: HSC1531

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HIM1435 SURVEY OF HUMAN STRUCTURE AND DISEASE (3)
This is the second of a two course series that will be a survey of the structure, function, and disease processes of the human body along with the current diagnostic and clinical treatment modalities. This course is geared to the health information technology student who will be utilizing this knowledge to code and classification diagnoses, procedures, diagnostic services rendered to patients in the healthcare environment. In Part II of this course, the student will learn about the basic structure and functions of systems, basic diagnostic testing and pharmacological treatment for conditions found in the following systems: Endocrine, the Senses, Cardiovascular, Respiratory, Lymphatic and Immune, Gastrointestinal, Urinary and Reproductive Systems. Students will be introduced to basic pharmacology throughout the course and will learn the 50 most commonly prescribed. Prerequisite: HIM1430

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HIM1800 PROFESSIONAL PRACTICE EXPERIENCE: B (2)
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. Prerequisite: HIM1253 HIM1260

Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=71. 18

HIM2012 HEALTH RECORDS LAW (3)
This course focuses on the impact of legal and ethical issues in health information management. Topics include an overview of the branches of government, tort law; confidentiality and release of information, subpoenaed information; record retention and security; information consent; liability; patient rights; negligence and malpractice; and ethics. Upon completion, students should be able to comply with legal requirements and be aware of legislative and regulatory trends. Prerequisite: HIM1110

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HIM2112C ELECTRONIC MEDICAL RECORD AND TECHN (3)
This course will review the history of the electronic health record and current trends in healthcare information applications such as clinical information systems, administrative information systems, and management support systems. Students will explore the transition from a paper-based health record to an electronic health record and associated issues. Prerequisite: HIM1800

Corequisite: HIM2012 HIM2652

Lec Hrs=32 Lab Hrs=16 Oth Hrs=0 Fees=0. 00

HIM2214L HEALTH STATISTICS (1)
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.

Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0. 00

HIM2232 CODING II (2)
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-9-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. Prerequisite: HIM1253 HIM1253L.
Pre or Corequisite: HIM2232L.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=57.00

HIM2232L CODING II LAB (1)
This lab course provides HIM students an opportunity to apply basic concepts and techniques for ICD-9-CM and CPT coding using actual patient records and simulated patient records; both paper and electronic format from different treatment venues. Students will be guided through the practice ending by an experienced coding instructor with a detail analysis of correct coding technique. Students will be able to assess their own level of proficiency and access assistance in areas of identified coding weaknesses. Students will be introduced to encoding systems: 3M and QuadraMed. Prerequisite: HIM1253 HIM1253L

Pre or Corequisite: HIM2232
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

HIM2234C ADVANCED CODING CONCEPTS (2)
This is an advanced coding lecture lab course giving the student extensive hands-on experience in coding complex and sophisticated cases from inpatient, outpatient and physician office settings typically handled by the coding specialist on the job. Emphasis will be placed on quality of specific coding, sequencing, coding compliance and billing methodology. Students will be expected to code assigned cases utilizing the ICD-9-CM, ICD-10-CM, ICD-10-PCS and CPT coding manuals and automated coder/grouper. All coding exercises will be timed, conducted and verified in the classroom.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=57.00

HIM2500 PERFORMANCE IMPROVEMENT (2)
This course is an introduction to the principles of performance improvement and quality management in health care. Topics include: clinical quality improvement; utilization management; risk management; medical staff credentialing and peer review; accreditation standards; laws and regulations; tools for data collection, analysis, and display; and the role of the HIM department. Upon completion, students should be able to apply performance improvement techniques; collect, analyze, and display data; and support a range of quality management activities. Prerequisite: HIM2012
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

HIM2512 SUPERVISION & ORGANIZATIONAL LIFE (2)
This course covers management and supervision principles as they are applied to healthcare settings. A study of the aspects and techniques of planning, organizing, motivating, and controlling is presented with emphasis on communication, collaboration, and decision making. Prerequisite: HIM2012
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

HIM2652 HEALTH INFORMATION SYSTEMS (3)
This course is an introduction to information technology related to healthcare 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 healthcare. Prerequisite: CGS1100 HIM1800
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

HIM2728 CODING III (2)
This coding course is designed to provide an introduction into basic ICD procedural coding and coding guidelines. The course will focus on defining basic coding definitions, review of coding guidelines. This course is taught in conjunction with a lab class to allow the student sufficient hands on inpatient procedural coding experience. Corequisite: HIM2728L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

HIM2728L CODING III LAB (1)
This lab course provides HIM students an opportunity to apply basic concepts and and techniques for ICD-10-PCS coding using actual patient records and simulated patient 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. Corequisite: HIM2728
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

HIM2810 PROFESSIONAL PRACTICE 2 (2)
This class is a continuation of the supervised professional practice experience in a health information management department. Emphasis is on health information systems, coding, and law and ethics. Upon completion, students should be able to apply health information theory to practice. Each student will be responsible for completion of a Professional Practice II Workbook. Prerequisite: HIM1800 HIM2012 HIM2232
Corequisite: HIM2234C
Lec Hrs=0 Lab Hrs=0 Oth Hrs=64 Fees=129.18

HIM2390L TRANSITION SEMINAR LAB (1)
This hands on lab course will focus on assisting the student to begin integration into the health information management field by exploring career options, developing a professional development plan, creating a resume, exploring credentialing requirements, and preparing the student to leave the classroom and enter the workplace. Activities conducted in the classroom will assist the student to enter the workplace, as a team player with a positive attitude and team communication skills. The course will introduce the student to the preparation needed to sit for the RHIT National Examination by AHIMA. To pass this course, the student must pass the final Mock RHIT Exam with a score of 79% or higher as required for the RHIT National Examination.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

HIS2939 SPECIAL TOPICS IN HISTORY (3)
The content of this course will vary, to be determined by the instructor of record. The course is intended to offer students the opportunity for in-depth study of specialized areas and topics in history.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

HIS2955 HISTORY STUDY ABROAD (3)
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

HLP1081 TOTAL WELLNESS (2)
Total Wellness emphasizes the importance of knowledge, attitudes, and practices relating to personal wellness. It is a course designed to expose students to a broad range of issues and information relating to the various aspects of personal wellness including physical, social, emotional, intellectual, spiritual and environmental wellness. This course integrates personal wellness and fitness in both a classroom and exercise environment. Evolving current topics such as nutrition, disease prevention, stress reduction, exercise prescription, and environmental responsibility are integrated to enable the student to understand the lifelong effects of healthy lifestyle choices. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=16 Oth Hrs=0 Fees=10.00

HLP1087 WELLNESS WORKOUT (1)
This course is an advanced extension of the wellness track classes. It reviews exercise principles and offers an opportunity for pre-testing to aid in Personal Program Development and post-testing for improvement evaluation. An individualized approach is used in helping class members to develop and implement a personal wellness program. Prerequisites: (any of the following): HLP1081, PEM1116, PEM1131, PEM1141, PEM1181, PEN1171, HSC1101C or instructor's approval. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=14.00

HLP2949 CO OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience.
Students are graded on the basis of documentation of learning acquired as reported by students and employer 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.

Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**HSA2810L PRACTICUM IN HEALTH FACILITY ADMINI (6)**
An exposure and involvement in the managerial activity of health care facilities for the purpose of developing recognized competencies through the application and demonstration of prescribed objectives. Prerequisite: ACG2001 HSA2111 HSC1531 HSC1949 MAN2021 MNA2345Lec Hrs=0 Lab Hrs=0 Oth Hrs=272 Fees=39.75

**HSC0602 PREVENTION OF MEDICAL ERRORS (0)**
This course is designed to increase the healthcare worker’s awareness of medical errors, their causes, error-prone situations, and concern for populations at risk. It also addresses consumer education regarding things they can do to decrease the chance of an error. This course meets the mandate of the Florida Legislature, requiring training on prevention of medical error & follows the curriculum guidelines for issuance of 2 contact hours needed for license renewal.

Lec Hrs=2 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**HSC0603 ALL HAZARDS TRAINING-AWARENESS LEVE (0)**
This is the first course in a series of 4 courses presenting information on Bioterrorism and All-hazards Preparedness and Response appropriate for a variety of healthcare professionals and health-care workers. Course 1 includes 4 Modules, each approximately 1 hour in length. The total time for Course 1 is 4 hours. Each Module includes several Lessons, which are self-contained 'Learning Events' that can be measured.

Lec Hrs=4 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**HSC101C INTRODUCTION TO HEALTHFUL LIVING (1)**
This course provides a personalized introduction to wellness; wellness components of flexibility, muscular strength/endurance, cardiovascular wellness, and 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.

Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=15.00

*This course can be used for the AA degree.*

**HSC1149 PHARMACOLOGY (2)**
A course designed to introduce the Nursing student to the essential concepts and principles of pharmacology. Included are the concepts of pharmacokinetics and pharmacotherapeutics. There is an emphasis on the application of the nursing process as a practical organizational tool utilized in the care of the patient receiving pharmacological agents.

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**HSC1531 MEDICAL TERMINOLOGY (3)**
Provides a broad survey of the language of medicine in the health science professions. Emphasis is placed on the building of medical terms from word parts. Pronunciation is practiced utilizing a CD provided with the textbook.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**HSC1949 HEALTH SERVICE WORK EXPERIENCE (20)**
Students with a postsecondary adult vocational certificate program may receive credit for classroom and work experience based upon departmental review. Credits may apply only to students seeking an A.S. degree in Health Service Management.

Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=0.00

**HSC2100 PERSONAL AND COMMUNITY HEALTH (3)**
This study of health problems relating to the individual community including mental health, physical fitness, nutrition, the use of tobacco, alcohol and drugs, marriage and family living, safety, and the study of diseases. Elective credit only. *This course can be used for the AA degree.*

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
HSC2400 FIRST AID AND SAFETY (3)
Accepted practices and training in first aid care of the injured and medical self help for survival in emergencies. Course includes suggested procedures effective until adequate medical assistance can be obtained. Principles of safety problems and accident prevention are included. Elective credit only. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HUM2700 HUMANITIES TRAVEL STUDY (3)
An examination of the styles and influences of Music, Art, Theatre, Religion, Literature, and Philosophy in selected geographical areas. Course combines classroom preparation and foreign travel. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HUM2701 HUMANITIES TRAVEL STUDY (6)
The same general description applies to this course as is given to the Humanities Travel Study offered for three semester hours. However, a longer itinerary of the location(s) to be visited will necessitate more extensive course requirements. This course can be used for the AA degree.
Lec Hrs=96 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

HUNI1202 ESSENTIALS OF NUTRITION & DIET THER (3)
A study of nutritional science the nutrient, interrelationships and the nutritional needs of persons at various stages of life cycle. Particular emphasis will be placed on diet therapy in the modification of disease process. This course is open to all allied health students only or with permission of the instructor. 3 hrs. lec. Term I, II, and III.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=12. 00
This course can be used for the AA degree.

IDH2121 HONORS INTERDISCIPLINARY STUDIES IN (3)
The Honors Interdisciplinary Studies Seminar is the capstone course in the Honors Program. It is open to Honors Institute students who have attended Broward College for at least one term and have met half of the requirements for graduation from the Honors Institute. 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 Prerequisite: ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

IDS2931 INTERDISCIPLINARY LEADERSHIP STUDIE (3)
This seminar focuses on the refinement of leadership skills, provides an enhanced leadership and group dynamics theory and will assist the student in developing a personal philosophy of leadership and awareness of the moral and ethical responsibilities of leadership. Topics include decision making, goal setting, building trust, empowering others, conflict resolution, managing change, team building, and servant leaders. Reading and films from classic works in literature, contemporary and multi-cultural writing, and experiential learning exercises with current leadership theories and practices. Includes a service learning component, a shadowing experience, and a journal that highlights the students' entire leadership experience, both in and out of class, consisting of written responses to each of the classic works and contemporary reading assignments, specific critical analyses of films and other assignments as given in the class. Prerequisite: ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

IND1022 PRINCIPLES OF INTERIOR DESIGN (3)
This introductory studio course examines the role of the interior designer, the psychology of space, color and client interactions. Emphasis is placed on exploration of the elements and principles of basic design and their application in the process
of shaping and defining interior space and development of a basis for critical design analysis. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

INR2002 INTRODUCTION TO INTERNATIONAL RELAT (3)
A cross national analysis of the concepts of sovereignty, power, security, economic development and national interests in the formulation of foreign policy; the respective roles of the United Nations and the European Union within the context of the growth of Intergovernmental Organizations and Non-governmental actors such as legislatures and interest groups. Study of the utilization of those concepts on policy of both leading nations and the emerging states with emphasis on both conflictual issues related to both tangible and intangible causes as well as the cooperative aspects of a more globalized and interdependent economic system. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

ISM3013 INTRODUCTION TO INFORMATION SYSTEMS (3)
The course introduces fundamental concepts and methods related to the management of information systems in organizations. This course will cover a broad range of topics which will vary over time as technology advances. In the end, this course will equip students with the applied knowledge of management information systems for use in business decision making as impacted by information and decision support systems.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ISM3320 INFORMATION SYSTEMS CONTROL (3)
This course presents a balance of the management and the technical aspects of the discipline and addresses knowledge areas of the CompTIA Security+ certification exam throughout. It provides a comprehensive overview of network security and covers communication security, network and applications security, infrastructure security, threats and vulnerabilities, World Wide Web security, cryptography, operational/organizational security, disaster recovery, business continuity, as well as computer forensics. Prerequisite: ISM3013
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ISM3432 APPLIED QUALITY ASSURANCE METHODOLOGY (3)
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ISM4314 APPLIED PROJECT MANAGEMENT (3)
This course has been designed to be relevant for all professionals confronting project-related tasks, with particular attention given to the information systems context. Course content includes an overview of technology, an introduction to software development approaches, facets of project management, and organizational issues related to successful project management.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ISM4382 GLOBAL INFORMATION SYSTEMS (3)
This course addresses key management issues as they are applied to global information resources management. This course also addresses strategic global systems issues such as hardware, software, Enterprise Resource Planning (ERP), electronic business integration, security and infrastructure support for a variety of industries. Prerequisite: ISM3320
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ITA1120 ELEMENTARY ITALIAN I (4)
Fundamentals of speaking, listening-comprehension, reading, writing, and Italian culture. Classroom practice and exercises are supplemented by laboratory and workbook exercises done on-line weekly. Students expected to continue further implementation and expansion of their proficiencies in ITA 1121. This course can be used for the AA degree.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00

ITA1121 BEGINNING ITALIAN II (4)
Continuation of ITA1120. Further development of the basic skills in speaking, listening-comprehension, reading, writing, selected readings, and appreciation of culture. Classroom practice and exercises supplemented by laboratory and multi-media activities done on-line weekly. Prerequisite: ITA1120
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00
This course can be used for the AA degree.

ITA1170 ITALIAN STUDY TRAVEL (3)
A course designed for students who wish to combine the study of italian with travel to Italy.
Lec Hrs=15 Lab Hrs=0 Oth Hrs=90 Fees=0.00
This course can be used for the AA degree.

JOU1100 BASIC REPORTING (3)
Pre-professional course providing fundamental instruction and practice in writing as a basis for all upper division courses in journalism. Includes writing in the news style, leads, defining news, types of stories, organization of stories, policy and libel. Prerequisite: Permission of instructor or Prerequisite: ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

JOU1207L MAGAZINE PRODUCTION (3)
Course provides instruction and practical experience in the philosophical and technical aspects of magazine production, including printing processes, copy setting, picture editing, graphic design, and camera ready layout techniques. This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=0.00

JOU1400L NEWSPAPER PRACTICUM I (1)
Practical application of news writing and editing principles through work with college media. Instructor's approval or Prerequisite: JOU1100.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

JOU1401L NEWSPAPER PRACTICUM II (2)
Continuation of JOU1400L. Students may take JOU1400L and JOU1401L during the same term.

JOU2200 NEWSPAPER EDITING AND MAKEUP (3)
Course provides instruction and practical experience in copy editing, rewriting, headline writing, page design for both makeup copy and advertising, picture cropping and scaling, cutlines, and an introduction to desktop publishing. Instructor's approval or Prerequisite: JOU1100
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

JOU2949 CO OP WORK EXP (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.
JST1500 SURVEY OF JEWISH CULTURE (3)
A survey of the development of Jewish culture through a study of the concepts, values, traditions and rituals of Judaism. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

JST1700 THE HOLOCAUST (3)
The historical, political, literary, religious, and philosophical dimensions of the Holocaust. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

JST2400 SURVEY OF JEWISH CIVILIZATION (3)
A survey of the history of Jewish civilization beginning with the origins of the Hebrews, through early Christianity and the Renaissance, to the State of Israel. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

JST2815 HISTORY OF MODERN ISRAEL (3)
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. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LAH1004 THE HISTORY OF THE TWO AMERICAS II (3)
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. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LAH1005 THE HISTORY OF THE TWO AMERICAS II (3)
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. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LEI1000 INTRODUCTION TO RECREATION (3)
This course acquaints the individual with the recreation organization and opportunities for leaders in the field. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LEI1260 INTRODUCTION TO FITNESS AND OUTDOOR (3)
This course will introduce students to the career opportunities available in the field of outdoor recreation/adventure education. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LEI1700 RECREATION FOR SPECIAL GROUPS (3)
An overview of the characteristics and needs of members of special groups and how to plan and implement recreational activities appropriate for each group. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LEI2401 SPORTS, FITNESS AND RECREATION MANA (3)
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. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LEI2731C SPORTS, FITNESS AND RECREATION THER (2)
An overview of various therapies that can be useful in a recreational setting. This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=0.00

LEI2861 SPORTS, FITNESS, RECREATION TECHN (3)
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.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LIT1171 JEWISH LITERATURE I: 1800 TO THE H (3)
A study of selected works from the Jewish Enlightenment to 1933. Analyzes the major characteristics of worldwide Jewish literary works. Includes such authors as Sholom Aleichem, Agnon, Bialik, Cahan, and H. Roth. May be used for study abroad. Prerequisite: Eligibility for ENCI101. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LIT1172 JEWISH LITERATURE II: HOLOCAUST TO (3)
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 and Yehoshua and Appelfeld. May be used for study abroad. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LIT1170 THE BIBLE AS LITERATURE (3)
A study of literary forms found in the Bible, such as history, biography, short story, parable and lyric poetry. Basic literary analysis of selected portions of the Bible. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LIT2030 INTRODUCTION TO POETRY (3)
Students will be introduced to a representative selection of poetry from various cultures and time periods. Texts may be selected from major figures within movements during specific periods, such as Romanticism, Modernism or New Formalism, the Black Arts Movement, the New York School or the San Francisco Renaissance, Confessional Poetry, Performance Poetry or Concrete Poetry, the Beats, Slam Poets, Language Poets or any other emerging forms, writers or groups within the art. A student must earn a grade of "C" or higher to meet the requirements of the Gordon rule. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

LIT2110 WORLD LITERATURE FROM ANCIENT WORLD (3)
A survey of literature from the ancient, medieval, and early modern world. The works of selected authors may include Homer, Sappho, Plato, Sophocles, Ovid, Confucius, Lao Tzu, Dante, Chaucer, Boccaccio, Cervantes, and Shakespeare. Texts may also include excerpts from the Old and New Testaments, The Koran, Bhagavad-Gita, The Rubaiyat of Omar Khayyam, and The Arabian Nights. Upon successful completion of the course, students will comprehend the significant literary figures, mythologies, and historical and philosophical movements in world literature masterpieces. This course can be used for the AA degree. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LIT2020 INTRODUCTION TO THE SHORT STORY (3)
A survey of the development of the short story, to include analysis of short stories by authors that reflect a diversity of cultural perspectives. This course may include a wide variety of authors such as Baldwin, Borges, Bellow, Camus, Carver, Cather, Chekhov, Chopin, Crane, De Maupassant, Faulkner, Fuentes, Hawthorne, Hemingway, Hurston, Kafka, Marquez, O'Connor, Oates, Poe, and Walker, among others. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

LIT2120 WORLD LITERATURE FROM ENLIGHTENMENT (3)
Students will be introduced to a representative selection of world literature from the seventeenth century to the present. Texts may be selected from major literary figures such as Moliere, Voltaire, Rousseau, Franklin, Equiano, Wollstonecraft, deGournay, Tolstoy, Gandhi, Camus, Lessing, Eliot, Achebe, Neruda, and Garcia-Marquez, Erdrich, Kincaid, and Lahari. Upon successful completion of the course, students will be exposed to significant authors, themes, literary genres, and historical and philosophical movements in world literature masterpieces. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

LIT2190 CARIBBEAN LITERATURE (3)
A survey of Caribbean Literature covering original and translated works from the Anglophone, Francophone and Spanish speaking Caribbean. Students will analyze texts from authors such as C. L. R. James, Jean Rhys, Edwidge Danticat, Maryse Conde, Antonio Benitez Rojo, Paule Marshall, David Dabydeen, V. S. Naipaul, among others. Upon successful completion, students will evaluate significant concepts and assess a diverse body of literary figures including authors, poets, and critics associated with the Caribbean. This is a writing credit course.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

LIT2310 LITERATURE OF THE SUPERNATURAL & SC (3)
A survey course of science fiction, high fantasy, and dark fantasy/horror literature. Students will examine works that cover such topics as the future, technology, science, other worlds, paranormal life forms and occurrences, aberrant psychology, and imaginary societies. This course may include readings from a wide variety of authors such as Isaac Asimov, Ray Bradbury, Michael Crichton, Mary Shelley, Edgar Allan Poe, Stephen King, J. R. R. Tolkien, C. S. Lewis, J. K. Rowling, Clive Barker, and Lord Dunsany.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

LIT2341 MYSTERY FICTION (3)
A discussion of mystery fiction by investigation of the plot, characters, settings, styles, motifs, and development of the most representative authors of detective, police, procedural, spy, and mystery thriller fiction. Includes authors such as Poe, Christie, Doyle, and Hammett.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

LIT2510 MALE FEMALE IMAGES IN LITERATURE (3)
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
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LIT2935 SEMINAR IN LITERATURE (3)
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. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

LIT2953 TRAVEL SEMINAR IN LITERATURE (3)
A combination of classroom preparation plus travel. Variable content depending on area to be visited.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAC105 COLLEGE ALGEBRA (3)
A college algebra course containing topics such as solving, graphing and applying linear and quadratic equations and inequalities; exponential and logarithmic properties; linear, quadratic, rational, absolute value, square root, cubic, and reciprocal functions operations, compositions, and inverses of functions; and systems of equations and inequalities, all with applications throughout the course. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course required.
Prerequisite: MAT1033
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=23.00
This course can be used for the AA degree.

MAC114 TRIGONOMETRY (3)
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; DeMoivre’s Theorem; vectors; polar coordinates; 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.
Prerequisite: MAC1105
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.
MAC1140 PRE CALCULUS ALGEBRA (3)
This course, in conjunction with MAC1114, is designed to prepare the student for the study of calculus. Topics include sequences; series; mathematical induction; matrices; determinants; and systems of equations. Also included are polynomial, rational, exponential, and logarithmic functions and equations; and polynomial and rational inequalities. Functions and graphs are emphasized. A graphing calculator may be required. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course is required. Prerequisite: MAC1105
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MAC1147 PRECALCULUS ALGEBRA AND TRIGONOMETRY (5)
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, augmented matrices, sequences and series, and parametric functions. A graphing calculator may be required. Recommendation of the Mathematics Department or at least a grade of 'B' in the prerequisite course is required. Prerequisite: MAC1105
Lec Hrs=80 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MAC2233 CALCULUS FOR BUSINESS, SOCIAL AND LIFE (3)
This is a general education course which includes the college-level skills of calculus such as: functions, graphs, limits, differentiation, integration, average and instantaneous rates of change, and other applications. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course is required. Prerequisite: MAC1105
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MAC2311 CALCULUS AND ANALYTICAL GEOMETRY I (5)
This is the first of a three-course sequence in calculus. Students may need to a graphing calculator throughout the sequence of courses. Topics include: analytic geometry, functions, limits, continuity, derivatives and their applications, transcendental functions, 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. Prerequisite: MAC1114 MAC1140
Lec Hrs=80 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MAC2312 CALCULUS AND ANALYTICAL GEOMETRY II (5)
This is the second of a three-course sequence in calculus. Topics include techniques of integration, conics, polar coordinates, indeterminate forms, L'Hopital's Rule, proper integrals, infinite series, parametric equations, improper integrals, vectors, 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. Prerequisite: MAC2311
Lec Hrs=80 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAC2313 CALCULUS AND ANALYTICAL GEOMETRY III (5)
This is the third of a three-course sequence in calculus. Topics include vectors in 3 space, 3 dimensional surfaces, multivariate functions, cylindrical and spherical coordinates, multiple integrals, partial derivatives, vector fields, Green's Theorem, and Stokes' Theorem. 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. Prerequisite: MAC2312
Lec Hrs=80 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MAD2104 DISCRETE MATHEMATICS (3)
This course will emphasize mathematical theory, formal methods of proof, and applied problem-
solving techniques. Topics include formal proof, sets, logic, functions, probability, relations, graphs, trees, and Boolean algebra. Recommendation of the Mathematics Department or Prerequisite: MAC1140
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MAE3143 INTERACTIVE MIDDLE SCHOOL MATHEMATICS (3)
This course is designed for students who are majoring in middle and secondary mathematics education and who will be obtaining teaching certification in grades 5-9 and 6-12. In this course students learn principles of effective curriculum design and assessment and apply these principles by designing and developing interactive mathematics curriculum projects for middle school students. This course is requires structured clinical placement in which students present their projects in a middle school classroom environment. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline and required certification. (20 school-based hours) Prerequisite: MAE4320
Pre or Corequisite: MAE3941
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

MAE3941 TEACHING MIDDLE AND SECONDARY SCHOOL (3)
This course is designed to provide the student with the opportunity to apply learned concepts by observing and teaching small groups and whole class lessons in the mathematics classroom. Extensive Writing Component in the form of a journal is required. Forty hours (40) of structured school-based hours is required. Prerequisite: MAE4320
Pre or Corequisite: MAE3143
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

MAE4310 METHODS OF TEACHING MATH IN ELEMENT (3)
This course introduces conceptually and developmentally appropriate mathematics content based on the five content areas identified by the Florida Sunshine State Standards. These are Numeration & Number Sense, Geometry, Measurement, Algebraic Thinking, and Data Analysis & Probability. Within these content areas, 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. Fifteen hours of field placement are required. Prerequisite: EDF3280
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75
Prerequisite: EDF3280 MAC2311
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

MAE4320 METHODS OF TEACHING MATHEMATICS IN (3)
This course is designed to introduce methods and strategies that have been proven to be effective for teaching middle school mathematics. Topics in appropriate instructional techniques and selection of appropriate resources for diverse classroom activities. Additional topics include real world applications, the use of technology, understanding the diverse learner, multiple means of assessment and learning styles. In this course, the pre-professional educator learns principles of effective curriculum design and assessment and applies these principles by designing and developing interactive mathematics curriculum projects for middle school students. This course addresses specific Sunshine State Standards subject matter competencies. Prerequisite: EDF3280 MAC2311
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

MAE4330 METHODS OF TEACHING MATH IN SECONDARY (3)
This course is designed to introduce methods and strategies that have been proven to be effective for teaching secondary school mathematics. Topics in appropriate instructional techniques and selection of appropriate resources for diverse classroom activities, real world applications, the use of technology, understanding the diverse learner, multiple means of assessment and learning styles. The pre-professional educator learns principles of effective curriculum design and assessment and applies these principles by designing and developing interactive mathematics curriculum projects for high school students. This course addresses specific Sunshine Standards subject matter competencies and pedagogy pertinent to the discipline. 20 hours field. Prerequisite: EDF3280 MAC2311
MAE4945 STUDENT TEACHING IN MATHEMATICS (11)
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. "Lec Hrs=12 Lab Hrs=0 Oth Hrs=525 Fees=39.75

MAN2021 INTRODUCTION TO MANAGEMENT (3)
This course covers fundamental management principles and concepts. Emphasis is placed on the management functions of planning, organizing, staffing, directing and controlling. Principles of scientific management, motivation, and economic analysis are studied relative to their use in business decisions. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN2604 INTERNATIONAL BUSINESS ENVIRONMENT (3)
A basic course in international business theory and practice focusing on the challenges of managing the operations of an international business in diverse legal, political, economic, and cultural environments. Emphasis is placed on strategic planning and decision-making for the international operations of domestic, foreign and multinational corporations. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN2949 CO OP WORK EXP (3)
A course designed to provide training in a student field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by students and employer. Prerequisites: Co-Op department approval. Student 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. Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MAN3162 CUSTOMER RELATIONS FOR MANAGERS (3)

MAN3303 MANAGEMENT AND LEADERSHIP (3)
This course teaches students the basic concepts, principles, and techniques of business leadership. Emphasis is on developing a solid leadership foundation while centering in the real themes, demands, and opportunities of an evolving and dynamic business workplace. The course incorporates basic leadership skill development as it relates to the core aspects of management practice. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN3310 HUMAN RESOURCE MANAGEMENT (3)
This course introduces the full range of human resource management functional areas, including recruiting and hiring staff, performance evaluations, employment regulations, discipline and termination, downsizing, compensation and benefits, job analysis, the organized labor setting, equity/diversity issues, and policy design. The approach will focus on current issues and applications. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN3930 SEMINAR IN BUSINESS AND MANAGEMENT (1)
This course focuses on current and emerging issues in business management. Its format and topic will vary but will be a full day or half day seminar conducted by one or more industry
subject matter experts who 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 be taken 2 times for a total of 2 credits.

Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN4102 MANAGING CULTURAL DIVERSITY (3)
This course represents the basic concepts, principles, and techniques associated with leading cultural diversity in the global marketplace. Emphasis will be on the students developing an understanding of the interplay between leadership, cultural diversity, and the global business models. Students will also gain an understanding of how these concepts relate to and are applied in the regional markets like Asia, Latin America, Europe, Africa and the Middle East.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN4120 LEADERSHIP CHALLENGES AND SUPERVISI (3)
This course teaches the application of leadership theories, which include skill formation to develop leadership abilities. Team building skills are emphasized and discussed to enhance leadership effectiveness. Students learn the importance of visioning in their organizations.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN4504 OPERATIONS MANAGEMENT (3)
This course teaches the operational decision-making management techniques to improve the processes and productivity in organizations. Topics discussed are quality and outcomes; efficiency; forecasting; work flow processes; inventory control; design of goods and services; waiting lines; and critical path. Managing a project from beginning to end, including how to identify needs, and define, assign, and track items, is addressed.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN4570 PROCUREMENT MANAGEMENT (3)
This course is an introduction to the concepts, principles, and techniques of purchasing physical resources. Students will develop a basic knowledge of sound procurement practices within a managerial setting for all types of organizations.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN4720 STRATEGIC MANAGEMENT AND POLICY (3)
This course emphasizes strategic planning and strategy implementation in an organization. Students learn how to perform internal and external audits, identify problems, and formulate goals and objectives. Students will develop action plans, and evaluate the effectiveness of the outcome of the plan. Case studies are used to promote decision-making abilities. Prerequisite: BUL3130 FIN4460 GEB3213 MAN3240 MAN3303 MAN3310 MAN3930 MAN4102 MAN4120 MAN4504 Lab Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAN4900 CAPSTONE PROJECT (3)
This capstone course will provide the opportunity for the student to demonstrate that he/she has learned the material from the program and can apply it in the real world. It should be taken during the student's last semester at the college. It provides to the student with the opportunity to develop a plan to solve a problem dealing with management and organizational leadership issues of today. The student will choose one major plan to address the problem in detail. Prerequisite: BUL3130 FIN4460 GEB3213 MAN3240 MAN3303 MAN3310 MAN3930 MAN4102 MAN4120 MAN4504 Lab Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MAP2302 DIFFERENTIAL EQUATIONS (3)
Topics include the classification, solution and application of differential equations, including numerical methods, Laplace transforms, linear systems, and series solutions. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course is required. This course may be taken for honors credit with the permission of the instructor. Prerequisite: MAC2312 Lab Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

This course can be used for the AA degree.
MAR1011 PRINCIPLES OF MARKETING (3)
An introductory course covering the marketing management process. Special topics include the marketing manager's role in a market-directed economy, marketing objectives, strategic planning, and developing marketing mixes for target markets. Material is presented as it relates to the four "Ps" of marketing: product, place, promotion, and price. As a learning activity, students analyze and prepare case studies of businesses engaged in manufacturing, wholesaling, retailing and service. Students will have the opportunity to participate in Delta Epsilon Chi activities.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MAR2141 INTERNATIONAL MARKETING (3)
This course examines basic marketing principles related to business in an international setting. Emphasis is placed on the role of the international marketing manager in the development of marketing strategies for a variety of markets in diverse cultural and economic situations. Topics covered include the decision-making process in the area of foreign market analysis, target market identification, product planning, promotion, and channels of distribution.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MAS2103 LINEAR ALGEBRA (3)
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. This course may be taken for honors credit with the permission of the instructor. Prerequisite: MAC1144 MAC1140
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MAS4300 ABSTRACT ALGEBRA WITH INTRODUCTORY (3)
A course for math and math education majors. Abstract algebra is designed for the student experienced with using mathematical calculations to solve problems, and who now wishes to analyze the underlying justifications for these calculations' legitimacy. In MAS4300 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. Prerequisite: MAC2311
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

MAT0018 DEVELOPMENTAL MATHEMATICS I (4)
A course designed to improve the student's abilities with arithmetic, basic algebra, and problem solving. Topics to be studied include number families, arithmetic, order of operations, geometric formulas, unit analysis, linear equations in one variable, and data analysis. Problem solving is an integral part of this course. This course teaches the student to understand and communicate concepts of arithmetic and algebra, both orally and written, and helps prepare the student for college-level mathematics and math-based courses. It is nontransferable. Due to the nature of this course, calculators are not permitted. Corequisite: MAT0018L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

MAT0018L DEVELOPMENTAL MATHEMATICS I LABORAT (0)
A course designed to improve the student's abilities with arithmetic, basic algebra, and problem solving. Topics to be studied include number families, arithmetic, order of operations, geometric formulas, unit analysis, linear equations in one variable, and data analysis. Problem solving is an integral part of this course. This course teaches the student to understand and communicate concepts of arithmetic and algebra, both orally and written, and helps prepare the student for college-level mathematics and math-based courses. It is nontransferable. Due to the nature of this course, calculators are not permitted. Pre or Corequisite: MAT0018
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=21. 00

MAT0022 DEVELOPMENTAL MATHEMATICS COMBINED (8)
A course designed to satisfy the requirements of both MAT0018 and MAT0028 in one semester. Topics to be studied include arithmetic with whole numbers, integers and rational numbers, linear equations and inequalities in one variable, factoring, and basic linear graphing. Problem solving involving real-life scenarios is an integral part of this course. This course will teach the student to understand and communicate concepts of algebra in the language of mathematics, both orally and written. This course helps prepare the student for college-level mathematics and math-based courses. It is nontransferable. Due to the nature of this course, calculators are not permitted. Prerequisite: MAT0022L
Lec Hrs=96 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

MAT0022L DEVELOPMENTAL MATHEMATICS COMBINED (0)
A course designed to satisfy the requirements of both MAT0012 and MAT0024 in one semester. Topics to be studied include arithmetic with whole numbers, integers and rational numbers, linear equations and inequalities in one variable, factoring, and basic linear graphing. Problem solving involving real-life scenarios is an integral part of this course. This course will teach the student to understand and communicate concepts of algebra in the language of mathematics, both orally written. This course helps prepare the student for college-level mathematics and math-based courses. It is nontransferable. Due to the nature of this course, calculators are not permitted. Pre or Corequisite: MAT0022
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=20. 00

MAT0028 DEVELOPMENTAL MATHEMATICS II (4)
A course designed to broaden the student's arithmetic and equation-solving skills to include solving linear inequalities in one variable, polynomial factoring, solving quadratic equations, laws of exponents, rational and radical expressions, and graphing lines. Problem solving involving real-life scenarios is an integral part of this course. This course will teach the student to understand and communicate concepts of algebra in the language of mathematics, both orally and written. This course enhances the student's problem-solving skills, and helps prepare the student for college-level mathematics and mathematics-based courses. It is nontransferable. Due to the nature of this course, calculators are not permitted. Prerequisite: MAT0018
Corequisite: MAT0028L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

MAT0028L DEVELOPMENTAL MATHEMATICS II LAB (0)
A course designed to broaden the student's arithmetic and equation-solving skills to include solving linear inequalities in one variable, polynomial factoring, solving quadratic equations, laws of exponents, rational and radical expressions, and graphing lines. Problem solving involving real-life scenarios is an integral part of this course. This course will teach the student to understand and communicate concepts of algebra in the language of mathematics, both orally and written. The course enhances the student's problem-solving skills, and helps prepare the student for college-level mathematics and mathematics-based courses. It is nontransferable. Due to the nature of this course, calculators are not permitted. Pre or Corequisite: MAT0028
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=22. 00

MAT0990 DEVELOPMENTAL MATHEMATICS: A MODULA (4)
A course designed to satisfy the requirements of both MAT 0018 and MAT 0028 in modular format. This approach is designed to accommodate students' varying levels of preparedness. Topics to be studied include arithmetic with whole numbers, integers and rational numbers, linear equations and inequalities in one variable, factoring, laws of exponents, and basic linear graphing. This course will teach students to understand and communicate concepts of algebra in the language of mathematics, both orally and written. It is nontransferable. Due to the nature of this course, calculators are not permitted. Successful completion of this course requires a passing score on the departmental final exam.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

MAT1033 INTERMEDIATE ALGEBRA (3)
A course designed for students with strong arithmetic skills (without requiring a calculator) and an algebra background, such as solving linear equations in one variable and factoring polynomials. This course will extend students' algebra skills to include solving radical, rational,
quadratic & absolute-value equations, and recognizing relationships between radical expressions and rational exponents. Complex numbers are introduced in this course as well. 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 written. Prerequisite: MAT0028
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=24.00

MCB2010 MICROBIOLOGY (3)
An introduction to microbiology emphasizing principles of basic morphology, physiology modes of transmission, biochemistry and genetic mechanisms. It will include a survey of representative types of microorganisms and the role of pathogenic organisms in causing diseases and infections. Prerequisite: 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 Prerequisite: BSC2085 BSC2085L CHM1032. This course can be used for the AA degree. Pre or Corequisite: MCB2010L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MCB2010L MICROBIOLOGY LABORATORY (1)
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 Prerequisite: BSC2085 BSC2085L CHM1032. This course can be used for the AA degree. Pre or Corequisite: MCB2010
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=46.00

MCB3020 GENERAL MICROBIOLOGY (3)
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. Prerequisite: BSC2010 BSC2010L BSC2011 BSC2011L CHM1045 CHM1045L CHM1046 CHM1046L Corequisite: MCB3020L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MCB3020L GENERAL MICROBIOLOGY LAB (1)
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. Prerequisite: BSC2010 BSC2010L BSC2011 BSC2011L CHM1045 CHM1045L CHM1046 CHM1046L Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00

MEA0005 INTRODUCTION TO MEDICAL ASSISTING (1)
An overview of medical assisting and related health professions including duties and responsibilities. Public relations and interpersonal relationships of the healthcare team members are emphasized and will include therapeutic communication skills. Study of the various medical specialties and the history of medicine will be included. Prerequisite: Program admission Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MEA0204 CLINICAL PROCEDURES (2)
Designed to orient the medical assistant to all phases of patient care in the physician's examining room. Discussion of basic principles involved relating to: vital signs, physical examination, minor surgery, instrumentation sterilization, preparation of medications, physical therapy modalities and electrocardiography will be included. Approved uniform required. Pre or Corequisite: HSC1531 MEA0204L
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MEA0204L CLINICAL PROCEDURES LABORATORY (2)
Laboratory portion of MEA0204. Designed to orient the medical assistant to all phases of patient care in the physician's examining room. Practice of basic principles involved relating to vital signs, physical examination, minor surgery, instrumentation sterilization, preparation and administration of medications, basic principles of nutrition and physical therapy modalities will be
studied. Approved program uniform required. Special Fee Charged. Pre or Corequisite: MEA0204
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=30.00

MEA0233 ANATOMY AND PHYSIOLOGY FOR M. A. (3)
A basic anatomy and physiology course designed to provide instruction on human body structure, function, and associated pathology.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MEA0242 PHARMACOLOGY FOR THE MEDICAL ASSIST (2)
An introduction to medications, their classifications, dosage, administration, and the legal and ethical considerations applied.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=30.00

MEA0255 MEDICAL OFFICE PROCEDURES I (1)
Lecture portion of MEA0255L includes discussions in a classroom setting regarding urinalysis, microscopy, specimen collection and preparation, and basic office Microbiology/Bacteriology. Consists of 4 hours of lecture on a mini-semester twice a week. Special Fee Charged. Pre or Corequisite: HSC1531 MEA0255L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=15.00

MEA0255L MEDICAL OFFICE LAB PROCEDURES I (1)
Laboratory portion of MEA0255. Includes practice regarding urinalysis, and basic office Microbiology/Bacteriology. Consists of 4 hours of laboratory on a mini-semester. Professional uniform required. Pre or Corequisite: HSC1531 MEA0255
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=30.00

MEA0256 MEDICAL OFFICE PROCEDURES II (1)
Lecture portion of MEA0256L. Includes instruction in basic office hematology, immunology and chemistry. Professional uniform and shoes required. Special Fee Charged. Pre or Corequisite: HSC1531 MEA0256L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=15.00

MEA0256L MEDICAL OFFICE LABORATORY PROCEDURE (1)
Lab portion of MEA0256. Includes laboratory practice of basic office hematology, immunology and chemistry. Professional uniform and shoes required. Special Fee Charged Corequisite: MEA0256
Pre or Corequisite: HSC1531
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=30.00

MEA0258 RADIOLOGY FOR THE MEDICAL ASSISTANT (2)
Provides instruction in the basic principles of X-ray production, physics, radiographic equipment, imaging, processing, radiobiology, and radiation safety. Prerequisite: Program admission or department permission.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MEA0259 RADIOLOGY FOR MEDICAL ASSISTING PAR (2)
Provides instruction in radiographic anatomy, positioning, procedures, and pathology of the upper and lower extremities, shoulder girdle, pelvis, spine, bony thorax, chest, abdomen, skull, facial bones, and sinuses. Prerequisite: MEA0258
Pre or Corequisite: MEA0259L
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00

MEA0259L RADIOLOGY FOR MEDICAL ASSISTING PAR (1)
Laboratory portion of MEA 0259. Practical application of the principles of radiation protection, radiographic technique, ion, film handling and processing, darkroom operation, radiographic positioning and procedures related to the upper extremities, lower extremities, and chest. Special Fee Charged. Prerequisite: MEA0258
Corequisite: MEA0259
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=30.00

MEA0334 ADMINISTRATIVE OFFICE PROCEDURES (2)
Deals with financial management of the medical office. Basic Accounting procedures consisting of pegboard, billing, collections, coding, payroll processing, banking and medical transcription application are included. Students will be provided with the opportunity to learn fundamentals of health insurance practice in filing
insurance claims, diagnostic and procedural coding, setting appointments, managing the medical record, processing mail and other financial responsibilities associated with the medical office. Discussion regarding the different types of insurance and manage care plans and general clerical functions will be included. Medico legal and ethical responsibilities regarding financial aspects of the medical office will be studied. Corequisite: MEA0334L
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**MEA034L ADMINISTRATIVE OFFICE PROCEDURES LA (1)**
Laboratory portion of MEA0271. Deals with financial management of the medical office. Basic accounting procedures consisting of pegboard, billing, collection, coding payroll processing, banking and medical transcription application are included. Students will be provided with the opportunity to learn fundamentals of health insurance, practice in filling insurance claims, diagnostic and procedural coding, setting appointments, managing the medical record, processing mail and other financial responsibilities associated with the medical office. Discussion regarding the different types of insurance and manage care plans and general clerical functions will be included. Medico legal and ethical responsibilities regarding the financial aspects of the medical office will be studied. Corequisite: MEA0334
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=30. 00

**MEA0382 MEDICAL LAW AND ETHICS (1)**
The ethics of medicine and medical practice are studied. Legal requirements and implications to the medical professional are stressed. Prerequisite: Program Admissions.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**MEA0540 BASIC ELECTROCARDIOGRAPHY FOR MEDIC (1)**
This course will discuss a brief history of electrocardiography, a brief discussion of the cardiovascular system, the role of the Medical Assistant, the care and use of the electrographic (EKG) machine, positioning the patient, electrical hazards, normal EKG pattern, identifying and reporting abnormal EKG patterns and mounting the EKG. Ambulatory cardiac monitors will be studied. Corequisite: MEA0540L
Lec Hrs=37 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**MEA0540L BASIC ELECTROCARDIOGRAPHY FOR MED A (1)**
Laboratory portion of MEA0540. This course will emphasize the role of the Medical Assistant, the care and use of the electrographic (EKG) machine, positioning the patient, electrical hazards, normal EKG pattern, identifying and reporting abnormal EKG patterns and mounting the EKG. Corequisite: MEA0540
Lec Hrs=0 Lab Hrs=38 Oth Hrs=0 Fees=30. 00

**MEA0800 PRACTICUM IN MEDICAL ASSISTING (7)**
Student assigned to physician's office, clinic, or laboratory for a total of two hundred hours. Conference meetings will be arranged on an individual or group basis at a time and place to be arranged by the student and the coordinator. Attendance at group orientation prior to assignment is mandatory. Prerequisite: all courses suggested in Term I. Corequisite: all courses suggested in Term II.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=206 Fees=39. 75

**MEA0952 PRACTICUM IN MEDICAL ASSISTING (0)**
Lecture course designed to serve as a review for medical assisting students in preparation for their national certification examination. Selected areas of the curriculum will be emphasized as needed. Corequisite: MEA0800
Lec Hrs=38 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**MGF1106 MATHEMATICS FOR LIBERAL ARTS I (3)**
This is a general education course which includes the college-level skills not included in the courses MAT0012 Pre Algebra, MAT0024 Elementary Algebra, and MAT1033 Intermediate Algebra. The 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 other disciplines, including, but not limited to, business and the physical sciences. Recommendation of the Mathematics Department or at least a grade of
"C" in the prerequisite course is required. Prerequisite: MAT1033
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=24.00
This course can be used for the AA degree.

MGF1107 MATHEMATICS FOR LIBERAL ARTS II (3)
This is a general education course which includes college-level skills from a variety of mathematical topics. The course will include at least four selected topics from among: mathematics of finance; linear and exponential functions; number systems; history of mathematics; elementary number theory; graph theory; numerical methods and algorithms; game theory; voting and apportionment theory; and student project(s) (strongly recommended). This course will also emphasize applications to real-world situations and the integration of other academic disciplines, including (but not limited to) business and the physical and social sciences. Recommendation of the course. Recommendation of the Mathematics Mathematic Department or at least a grade of This course can be used for the AA degree. "C" in the prerequisite course is required. Prerequisite: MAT1033
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MHF4404 HISTORY OF MATHEMATICS (3)
The main aim of this course is to introduce the student to the study of the history of Mathematics. 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 to mathematics as it is applied today. The course is designed to be of interest to persons of various backgrounds. This will include math students who want to understand the development of mathematics, teachers of mathematics at all levels and those students who have an interest in social and cultural history. Prerequisite: MAC2311 MAD2104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MKA1021 SALESMANSHIP (3)
Through a combination of principles and techniques, this course identifies the why, what, how and when of selling. Students develop skills in prospecting, opening the sale, presenting customer benefits, overcoming objections, and closing the sale. Students will prepare an oral presentation based on the DECA Sales Representative contest.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MKA1511 ADVERTISING (3)
This course introduces the use of promotional strategy and marketing communications in achieving marketing objectives. It focuses on how product features/benefits can be translated into promotional appeals that will influence customer purchasing behavior. Topics include promotional objectives, product positioning, selecting media, creative analyses, budgeting and measuring promotional effectiveness. As a learning activity, students prepare an advertising campaign for a product, business, or not-for-profit organization. Students will have the opportunity to participate in Delta Epsilon Chi activities.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MKA1930 SEMINAR I: MARKETING IN PERSPECTIVE (3)
This course includes marketing management related activities such as individual projects in promotion and entrepreneurship, marketing research and career planning. The students have the opportunity to develop leadership skills through participation in Delta Epsilon Chi activities.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MKA2042 RETAILING (3)
This course provides an introduction to the management functions unique to retail store operations. Special topics include department store organization, shrinkage prevention, store location and layout, shopping centers, and merchandising. Upon successful completion of this course, students shall be able to demonstrate competencies needed in retailing positions at the mid-management and owner-management level. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MKA2931 SEMINAR II: RESEARCH IN MARKETING (3)
This course includes marketing management related activities such as individual projects in advertising, promotion, entrepreneurship, marketing research and career planning. Students will expand and enhance the knowledge gained in the prerequisite course Marketing Seminar 1. Students will have the opportunity to develop leadership skills through participation in Delta Epsilon Chi related activities. Prerequisite: MKA1930
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MKA2932 SEMINAR III: MARKETING MANAGEMENT (3)
This course includes marketing management related activities such as individual projects in promotion and entrepreneurship, marketing research and career planning. The students have the opportunity to develop leadership skills through participation in Delta Epsilon Chi related activities. Prerequisite: MKA1930 MKA2931
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MKA2949 CO OP WORK EXP (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MMC1000 INTRO TO MASS COMMUNICATION (3)
Overview of contemporary mass media and its historical background. Includes processes and effects of media messages on the individual and society. Deals with the media industry, its responsibilities, legalities, and careers. Media discussed may include newspapers, magazines, books, radio, television, advertising, public relations, and the movie and recording industries. Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MNA1161 INTRODUCTION TO CUSTOMER SERVICE (3)
This course provides the student with the basic concepts and current trends in the customer service industry. Through actual case studies, the students analyze organizations which have implemented successful customer service strategies.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

MNA1821C INTRODUCTION TO E-COMMERCE (3)
This course examines the history, basic, tools, and other important issues surrounding the many forms of Electronic Commerce. The students develop skills and gain knowledge and experience with a networked community designed for business function and transactions. Subject areas include: types of E-Commerce; E-Marketing; E-Accounting; E-Customer Service; effective E-Commerce solutions and the development process.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0. 00

MNA1948 INDUSTRY WORK EXPERIENCE (27)
Students with a postsecondary adult vocational certificate or equivalent may receive credit based on departmental review. Credits may apply only to students seeking an A. S. in Industrial Management Technology.
Lec Hrs=0 Lab Hrs=300 Oth Hrs=0 Fees=0. 00

MNA2345 PRINCIPLES OF SUPERVISION (3)
This course provides an overview of fundamentals of supervision and the management of people. It emphasizes the role of supervision in business organizations, by focusing on supervisory processes; examining functions of planning, organizing, staffing, directing, controlling and their relationships to daily responsibilities of the supervisor.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MNA2905 INDEPENDENT STUDY IN INDUSTRIAL MAN (3)
A directed study course available to both majors and non-majors who wish to investigate a particular concern or related issue in the field of
Industrial Management. The student will make application for the course to the program manager. Prerequisite: All students must contact the Program Manager to obtain registration approval.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00

**MNA2949 CO-OP WORK EXPERIENCE (3)**
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of learning objectives and employer evaluations. Prerequisite: Program Manager approval. All students must contact the program manager to obtain registration approval.
Lec Hrs=0 Lab Hrs=144 Oth Hrs=0 Fees=0.00

**MSL1001 FOUNDATIONS OF OFFICERSHIP (2)**
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.
Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

**MSL1002 BASIC LEADERSHIP (2)**
Army ROTC: Presents fundamental leadership concepts and doctrine, student will practice basic skills that underlie effective problem solving and examine the officer experience.
Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

**MSL2101 INDIVIDUAL LEADERSHIP STUDIES (2)**
Army ROTC: Develops knowledge of self, self-confidence, individual leadership skills, problem solving and critical thinking skills, and improves communication and conflict resolution skills. This course can be used for the AA degree.

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**MSL2102 LEADERSHIP AND TEAMWORK (2)**
Army ROTC: Focuses on self-development by gaining knowledge of self and group processes and by challenging current beliefs, knowledge and skills.

Lec Hrs=16 Lab Hrs=16 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

**MSS0001 MEDICAL ETHICS AND STANDARDS FOR MA (0)**
Course presents a detailed exploration of ethics and professionalism as it related to massage therapy, focusing on the development and application of appropriate professional boundaries and the psychological dimensions of the client-therapist relationship. Licensure, national certification, professional organizations, malpractice insurance, sexuality, cultural diversity, and the other concepts related to ethical practice are discussed.
Lec Hrs=15 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**MSS0150 ANATOMY AND PHYSIOLOGY OF BODY SYST (1)**
The structure and function of human organ systems as they service of massage therapy are presented. Basic pathophysiology of the major body systems and organs as they apply to massage therapy are discussed in relationship to appropriate care by the massage therapist. Systemic contraindications, local contraindications and cautions that influence massage are presented.
Lec Hrs=45 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**MSS0156 ANATOMY AND PHYSIOLOGY FOR MASSAGE (1)**
Course provides an opportunity for students to develop an applied understanding of neuromusculoskeletal anatomy. Postural analysis is presented. Students study the major muscles of the body, their origins, insertions, tendons of attachment, and actions; as well as associated bones, bony landmarks and stabilizing ligaments for each joint. Planes of movement and lever classification are discussed. Prerequisite: MSS0150
Corequisite: MSS0156L
Lec Hrs=45 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**MSS0156L ANATOMY AND PHYSIOLOGY MASSAGE THER (2)**
Course provides integration of neuromusculoskeletal anatomy into therapeutic application of massage. Massage techniques are presented sequentially with review of positioning,
appropriate strokes, ethical situations, appropriate draping, etc. Throughout the course, charting and interviewing skills are taught and practiced.
Lec Hrs=0 Lab Hrs=60 Oth Hrs=0 Fees=107.

MSS0250 INTRODUCTION TO MASSAGE THERAPY (0)
Course presents an introduction to the massage therapy profession. Effective and appropriate communication techniques for management of the client-therapist relationship; communication skills necessary for working with colleagues in the health care community; and responsibility to the professional community and one's own community, through civic participation and membership in a professional association are discussed. The theory and history of massage therapy are explored.

Pre or Corequisite: MSS0001 MSS0250L
Lec Hrs=15 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MSS0250L INTRODUCTION TO MASSAGE THERAPY LAB (5)
Course explores the effects, precautions and variations associated with basic massage strokes and issues associated with touch and trust. Students learn how to perform a full body massage that includes the five basic Swedish massage strokes and variations plus compression and fascia release. Proper draping, lubrication, bolster use and turning procedures during the massage are also taught as well as appropriate use of pressure, rhythm and movement to enhance the massage's effects. The ability to locate areas of tension or discomfort in clients is developed. Efficient body mechanics, hygiene and self-care while performing massage are practiced. Introductory record keeping as well as centering and breathing techniques are presented.

Pre or Corequisite: MSS0001 MSS0250
Lec Hrs=0 Lab Hrs=170 Oth Hrs=0 Fees=107.18

MSS0281 ALLIED MODALITIES (0)
Basic principles of allied modalities such as Polarity Therapy, Asian massage, trigger point therapy, deep tissue massage, reflexology, myofascial massage, muscle energy technique and others are explored as well as demonstrated. Specific techniques are related to the activities or needs of unique populations as appropriate, including older adults, children, persons with disabilities, and athletes. Introduction to the basic elements of other natural health care disciplines is presented. Prerequisite: MSS0250 MSS0250L

Pre or Corequisite: MSS0281L
Lec Hrs=15 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MSS0281L ALLIED MODALITIES - LAB (4)
Students learn how to help promote relaxation and relieve muscle tension via palpation as well as by determining joint range of motion, and then applying massage, exercise and stretching to support normal motion, muscle tone and relaxation. General techniques for full body and seated massage are practiced. Emphasis continues on the development of correct body mechanics, injury prevention, table management, draping methods, and charting. Hands-on skills in several modalities such as reflexology, manual lymph drainage and neuromuscular therapy are developed. Prerequisite: MSS0250 MSS0250L

Pre or Corequisite: MSS0281
Lec Hrs=0 Lab Hrs=120 Oth Hrs=0 Fees=107.18

MSS0301 HYDROTHERAPY MODALITIES (0)
The therapeutic use of superficial heat and cryotherapy is discussed with an emphasis on developing an ability to make professional judgments about the application of the appropriate modality for each client situation. The history of hydrotherapy and principles of hydrotherapeutic applications and equipment, indications, contraindications are discussed. Basic principles of ultrasound, interferential current, TENS and electrical stimulation are presented. Prerequisite: MSS0250 MSS0250L

Pre or Corequisite: MSS0301L
Lec Hrs=15 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MSS0301L HYDROTHERAPY MODALITIES - LAB (1)
Practical experience in the use of ice, heat and hydrotherapies is provided. Application of physical agents modalities are practiced with emphasis on proper technique, safety, indications
and contraindications. Prerequisite: MSS0250 MSS0250L

Pre or Corequisite: MSS0301
Lec Hrs=0 Lab Hrs=45 Oth Hrs=0 Fees=107.18

MSS0803L MASSAGE THERAPY CLINICAL PRACTICUM (3)
Course encourages the synthesis and integration of principles and techniques learned across the curriculum. Students provide comprehensive massage therapy services in the Massage Therapy lab under direct supervision, including specific upper and lower body techniques. Introduces the experience of working in a massage clinic including learning principles of relating to clients, keeping records, determining fees, billing insurance, marketing and building a massage practice, maintaining hygiene standards and other activities. Students participate in case conferences and/or other professional discussions. In addition to laboratory sessions, students are required to engage in practice massage sessions outside of scheduled class hours, and must complete a minimum community service requirement.
Lec Hrs=0 Lab Hrs=110 Oth Hrs=0 Fees=61.18

MTB1103 BUSINESS MATHEMATICS (3)
This course emphasizes the application of mathematics to selected business topics and problems. In addition, it includes material in linear equations and descriptive statistics.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MTB1310 APPLIED MATHEMATICS (3)
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. Prerequisite: MAT0028
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=19.00
This course can be used for the AA degree.

MTB1325 ENGINEERING TECHNOLOGY MATH I (4)
This is the first course in a two term sequence for Electronics and Computer engineering technology students. Topics include Euclidean geometry, algebra, exponents and radicals, graphing, trigonometry, vectors, complex numbers, and straight line concepts. Calculators will be used to solve problems after the basic principles have been mastered. Prerequisite: MAT0028
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MTB1326 ENGINEERING TECHNOLOGY MATH II (4)
This is the second course of a two term sequence designed for Computer and Electronics engineering technology students. Topics include systems of linear equations, factoring and fractions, roots and radicals, quadratic equations, complex numbers, exponentials and logarithms, trigonometry, analytical geometry and linear inequalities. Calculators will be used to solve problems after the basic principles have been mastered. Prerequisite: MTB1325
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MTB1370 MATH TOPICS FOR HEALTH RELATED PROF (1)
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 upon application for the calculation of both oral and parenteral drug dosages. Pre or Corequisite: NUR1020
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MTE1004C INTRODUCTION TO MARINE TECHNOLOGY (3)
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 or wiring diagrams.
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=189.43
MTE1018C RIGGING AND MAKE READY (3)
Preparation and deliverable of sales merchandise, mounting of various accessories, rigging cables, wiring and control boxes. Minor maintenance and lubrication of systems. Prerequisite: MTE1004C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=259.43

MTE1040C MARINE DIESEL ENGINES I (3)
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. Prerequisite: MTE1004C MTE1400C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=130.43

MTE1167C MARINE FUEL SYSTEMS, DIESEL & GAS (3)
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, troubleshooting and test equipment using dynometer. Prerequisite: MTE1004C MTE1400C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=119.43

MTE1312C ADVANCED MARINE COMPOSITES, PAINTING (3)
Principles of advanced composite marine construction and repair. Painting and refinishing surface fundamentals. Prerequisite: MTE1004C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=429.43

MTE1400C MARINE ELECTRICITY (3)
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 environment. Prerequisite: MTE1004C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=283.43

MTE1542C AIR CONDITIONING AND REFRIGERATION (3)
Principles of air conditioning and refrigeration systems on marine vessels. Prerequisite: MTE1004C MTE1400C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=86.43

MTE1651C BASIC WELDING (4)
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. Lec Hrs=38 Lab Hrs=58 Oth Hrs=0 Fees=158.43

MTE2041C DIESEL ENGINES II (3)
Advanced theory of operation of diesel engines with an understanding of ABYC standards and recommended practices for systems. Prerequisite: MTE1004C MTE1040C MTE1400C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=192.43

MTE2234C MARINE INBOARD/OUTBOARD SAILDRIVE A (3)
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. The study of hydraulics in transmissions and theory of propellers. Prerequisite: MTE1004C MTE1018C MTE1400C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=118.43

MTE2420C ADVANCED ELECTRICAL SYSTEMS (3)
Advanced electrical systems and troubleshooting procedures, diagnosis and repair of circuits and equipment malfunctions on marine vessels. Prerequisite: MTE1004C MTE1400C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=265.43

MTE2490C MARINE ELECTRONICS (3)
Principles of on-board electronic systems, installation and troubleshooting of communication and navigational systems. Prerequisite: MTE1004C MTE1400C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=203.43

MTE2541C MARINE AUXILIARY EQUIPMENT (3)
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. Prerequisite: MTE1004C MTE1018C MTE1400C
Lec Hrs=16 Lab Hrs=64 Oth Hrs=0 Fees=106.43

MTE2949 MARINE INTERNSHIP (2)
Internship co-operative course providing on-the-job training at a local marine repair station. Includes required student outcomes meeting industry standards. Prerequisite: MTE1004C MTE1018C MTE1400C
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=21.43

MTG2204 GEOMETRY FOR TEACHERS (3)
This course is designed for middle and high school mathematics teachers. The course emphasizes Euclidean plane geometry with an introduction to the non-Euclidean geometries. The problems, proofs, and constructions involve line segments, angles, triangles, polygons, circles, parallel lines, and similarity. Credit for this course may not be used to meet general education requirements for the A.A. degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MTG3212 MODERN GEOMETRY (3)
A course for math and math education majors. Geometry is a major foundation of our mathematical understanding of the world, and this course will explore both its breadth and depth. This course rigorously examines the axioms and theorems of Euclidean geometry and the non-Euclidean geometries. The coordinate and translational geometries will be treated as well. This course is highly theoretical and proof-intensive. Thus some background will constructing direct proofs and proofs by contradiction is a necessary prerequisite to enrolling in this course. Prerequisite: MAD2104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MUE1440 STRING CLASS (1)
Development of elementary performing skills on the violin. A basic study of all string instruments. Examines literature and teaching techniques for group instruction of students. Pre or Corequisite: MUT1111
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MUE1450 WOODWIND CLASS (1)
Development of elementary performing skills on the clarinet. A basic study of all woodwind instruments. Examines literature and teaching techniques for group instruction of students. Pre or Corequisite: MUT1111
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MUH2019 DEVELOPMENT OF AMERICAN POPULAR MUS (3)
Popular music in the United States, from 1820 to the present, including the Big Band Era, Country and Western, Jazz, Black Music, and the Rock scene (beginning in 1955).
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MUH2111 MUSIC HISTORY AND LITERATURE (3)
A survey course tracing the historical development of Western music from antiquity through the Classical Period. Emphasis is placed on major composers and their works. Recommended for second-year music students. Pre or Corequisite: MUT1111
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MUH2112 MUSIC HISTORY AND LITERATURE (3)
A survey course tracing the history of music from the beginning of the 19th century to the present, showing the significance of music's development resulting from social, international and cultural influences.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MUL2010 MUSIC APPRECIATION (3)
Course for non-music majors, designed to develop a basic music vocabulary, establish critical listening skills, and survey the evolution of Western music within a framework of world cultures.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MUL2955 SEMINAR IN SPECIAL INTERNATIONAL ST (3)
A combination of classroom preparation and foreign travel with an emphasis on in-depth studies of major musical works.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MUM1600C INTRODUCTION TO RECORDING STUDIO PR (3)
Fundamentals and techniques of modern multi-track recording. Areas of concentration are studio procedures, equipment operation, microphone selection and placement, signal processors, musical instrument isolation, and acoustical properties. Prerequisite: MUS1360 MUS2342C PHY2464
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MUM2601C ADVANCED RECORDING ENGINEERING (3)
This class focuses on advanced application of recording and mix-down techniques, incorporating the use of overdubs and special effects. A multi-track recording project will be required. Prerequisite: MUM1600C MUS2344C MUS2348C
This course can be used for the AA degree.
Pre or Corequisite: MUS2349C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=100. 00

MUM2700 INTRODUCTION TO MUSIC BUSINESS (3)
An introduction to the history, principles and practices of the music industry. A systematic survey of the career options in the music industry. Topics include recording, publishing, licensing, copyrights, promotions, arts managements, music and instrument merchandising, contracts, music in mass communication, the internet and the music industry, live performance on a local and national basis, career options and career development with emphasis on commercial enterprise.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MUN1120 BAND (1)
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.
This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0. 00

MUN1180 CONCERT BAND (1)
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.
This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0. 00

MUN1210 SYMPHONY ORCHESTRA (1)
Open by audition to all students, faculty and members of the community who play an orchestral instrument. Chairs assigned by the conductor. 3 hours rehearsal weekly. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MUN1280 ORCHESTRA (1)
Open by audition to all students, faculty, and members of the community who play an orchestral instrument. Chairs assigned by the conductor. Three hours rehearsal weekly. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MUN1310 COLLEGE SINGERS (1)
Open to all college students by audition. Three hours rehearsal weekly. May be take four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

MUN1340 VOCAL ENSEMBLE (1)
A select vocal ensemble performing a wide variety of literature, including Jazz and Pop. Open to all students by audition. May be taken four times for transfer credit. Corequisite: MUN1310 or MUN1380 Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1341 SEAHAWK SINGERS (1)
A select vocal ensemble performing a variety of literature including jazz and pop. Open to all students by audition. May be taken four times for transfer credit. Corequisite: MUN1310 or MUN1380 Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1380 BROWARD CHORAL SOCIETY (1)
Open to all student, faculty and members of the community who have experience in the art of singing. Three hours rehearsal weekly. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1430 BRASS ENSEMBLE (1)
A select instrumental ensemble that performs music written or arranged for Brass instruments. Enrollment is determined by the director through audition. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1440 PERCUSSION ENSEMBLE (1)
A select instrumental ensemble that performs music written or arranged for Percussion instruments. Enrollment is determined by the director through audition. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1460 CHAMBER ENSEMBLE (1)
Small group whose members are selected by the director through audition. Study and performance of repertoire appropriate to the specific chamber media. Three hours rehearsal weekly. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1480 CLASSICAL GUITAR ENSEMBLE (1)
Open to all students, faculty and members of the community who play guitar. Enrollment is determined by the director through audition. Participants will study and perform music from all periods in preparation for public performance. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1481 JAZZ GUITAR ENSEMBLE (1)
Open to all students, faculty and members of the community who play guitar. Enrollment is determined by the director through audition. Participants will study and perform music of various styles in preparation for public performance. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1710 JAZZ ENSEMBLE (1)
Enrollment is determined by the director through audition. Study and performance of music associated with the popular music and show presentation fields. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1711 JAZZ COMBO (1)
Enrollment is determined by the director through audition. Study and performance of music associated with the popular music and show presentation fields. May be taken four times for transfer credit.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1712 COMBO LAB (1)
Enrollment is determined by the director through audition. Study and performance of music associated with the popular music and show presentation fields. May be taken four times for transfer credit.
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

MUN1780 JAZZ/POP ENSEMBLE (1)
Enrollment is determined by the director through audition. Study and performance of music associated with the popular music, show
presentation and dance band fields. May be taken four times for transfer credit.  
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0. 00  
*This course can be used for the AA degree.*

**MUO1501 OPERA WORKSHOP (1)**  
Open to all college students by audition. The study and performance of Opera Literature. May be taken four times for transfer credit.  
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0. 00  
*This course can be used for the AA degree.*

**MUO1506C OPERA PRODUCTION (1)**  
Open to all college students by audition. The study and performance of opera literature. May be taken four times for transfer credit.  
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=0. 00  
*This course can be used for the AA degree.*

**MUS1360 INTRODUCTION TO MUSIC TECHNOLOGY (3)**  
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.  
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**MUS2332C LIVE SOUND REINFORCEMENT (3)**  
This course explores techniques used for recording and reinforcing music on location. Topics include commonly encountered acoustical problems and an investigation of equipment and techniques used to overcome them. Prerequisite: MUM1600C MUS1360 MUS2342C  
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=100. 00

**MUS2342C DIGITAL AUDIO MUSIC PRODUCTION (3)**  
Upon completion of this course the student will have acquired a deep understanding of desktop music production. The physical aspects of sound, digital audio technology and studio production techniques will be explained and demonstrated in detail. Topics covered in class will include non-linear editing, digital signal processing, an introduction to MIDI and sequencing, concepts of signal flow, sound effects, basic mixing, and basic recording techniques. Studio lab assignments are performed outside of class reinforcing weekly lecture topics. Prerequisite: MUS1360  
*This course can be used for the AA degree.*  
Pre or Corequisite: MUT1111 MVK2221 PHY2464  
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=100, 00

**MUS2344C INTRODUCTION TO MIDI SYSTEMS AND SO (3)**  
This course will offer the student a comprehensive study of the Musical Instrument Digital Interface (MIDI) and its many musical applications with an emphasis on sequencing and sound design. Concepts of music synthesis and sound design are presented through the use of a computer, keyboard, and appropriate software. Prerequisite: MUS1360 MUS2342C  
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=100, 00  
*This course can be used for the AA degree.*

**MUS2348C DIGITAL AUDIO MUSIC PRODUCTION 2 (3)**  
This course explores techniques used for recording and reinforcing music on location. Topics include commonly encountered acoustical problems and an investigation of equipment and techniques used to overcome them. Prerequisite: MUS2342C MUS2344C Pre or Corequisite: MUM1600C  
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=100, 00  
*This course can be used for the AA degree.*

**MUS2349C ADVANCED PROJECTS IN MUSIC PRODUCTI (3)**  
This course will offer the student a comprehensive overview of the music production process, including composing, tracking, mixing, advanced synthesis techniques and delivery. Prerequisite: MUM1600C MUS2344C MUS2348C  
*This course can be used for the AA degree.*  
Pre or Corequisite: MUM2601C  
Lec Hrs=24 Lab Hrs=0 Oth Hrs=0 Fees=100, 00

**MUS2905 INDEPENDENT STUDY: MUSIC (3)**  
A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem related to music.
Prerequisite: instructor approval. Students will shape the course to fit their needs by planning activities with a faculty advisor.

Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00

This course can be used for the AA degree.

MUS2930 MUSIC: SPECIAL TOPICS (3)
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Topics will be identified by the MUS2930 course title published in the course schedules for each term that the course is offered. Special Topics credit hours are not automatically transferable. Transfer credit is the prerogative of the receiving institution.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

This course can be used for the AA degree.

MUS2940 MUSIC TECHNOLOGY CO-OP WORK EXPERIENCE (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: MUM1600C MUM2700 MUS2344C

Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

This course can be used for the AA degree.

MUT1001 FUNDAMENTALS OF MUSIC (3)
A study of basic music fundamentals for the non-music major or the beginning music major whose background in music has been minimal.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

This course can be used for the AA degree.

MUT1111 MUSIC THEORY I (3)
A course on music theory and related keyboard skills. Emphasis on diatonic materials. Pre or Corequisite: MUT1241. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MUT1112 MUSIC THEORY II (3)
A continuation of MUT1111. Prerequisite: MUT1111

This course can be used for the AA degree.

Corequisite: MUT1242

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MUT1241 EAR TRAINING AND SIGHT SINGING I (1)
A course in the development of sight singing and ear training skills. Corequisite: MUT1111

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MUT1242 EAR TRAINING AND SIGHT SINGING II (1)
A continuation of MUT1241. Prerequisite: MUT1241 This course can be used for the AA degree.

Corequisite: MUT1112

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

MUT2116 MUSIC THEORY III (3)
Continuation of MUT1112. Concentration on chromatic materials, musical forms, and 20th century techniques. Prerequisite: MUT1112

Corequisite: MUT2246

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MUT2117 MUSIC THEORY IV (3)
Continuation of MUT2116. Prerequisite: MUT2116

This course can be used for the AA degree.

Corequisite: MUT2247

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

MUT2246 EAR TRAINING AND SIGHT SINGING III (1)
A continuation of MUT1242. Prerequisite: MUT1242

This course can be used for the AA degree.

Corequisite: MUT2116

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

MUT2247 EAR TRAINING AND SIGHT SINGING IV (1)
Continuation of MUT1242. Prerequisite: MUT2246

This course can be used for the AA degree.

Corequisite: MUT2117

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

MUT2641 JAZZ THEORY AND IMPROVISATION I (3)
A study of the materials and structure of jazz music and the development of improvisational skills. Prerequisite: MUT1111

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

This course can be used for the AA degree.
MUT2642  JAZZ THEORY AND IMPROVISATION II (3)
A study of the materials and structure of jazz music and the development of improvisational skills. Prerequisite: MUT2641
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MVB1011 PRE-PRINCIPAL TRUMPET (1)
College preparatory applied instruction in Trumpet 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.
Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVB1012 PRE-PRINCIPAL FRENCH HORN (1)
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 (MUx) course other than Music Appreciation.
Corequisite: MVK1211 or MVK2221.
Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVB1013 PRE-PRINCIPAL TROMBONE (1)
College preparatory applied instruction in trombone 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.
Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVB1014 PRE-PRINCIPAL BARITONE HORN (1)
College preparatory applied instruction in baritone horn 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.
Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVB1015 PRE-PRINCIPAL TUBA (1)
College preparatory applied instruction in tuba 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.
Corequisite: MVK2221
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVB1211 TRUMPET (1)
One-half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVB1212 FRENCH HORN (1)
One-half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVB1213 TROMBONE (1)
One-half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVB1214 BARITONE HORN (1)
One-half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVB1215 TUBA (1)
One-half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

**MVB1311 PRINCIPAL TRUMPET I (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVB1312 PRINCIPAL FRENCH HORN I (1)**
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. Corequisite: MVK1211

**MVB1313 PRINCIPAL TROMBONE I (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVB1314 PRINCIPAL BARITONE HORN I (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVB1315 PRINCIPAL TUBA I (1)**
Applied instruction in tuba 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

**MVB2221 TRUMPET (1)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

**MVB2222 FRENCH HORN (1)**
One half hour lesson weekly and one hour practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=O Fees=50.00
This course can be used for the AA degree.

**MVB2233 TROMBONE (1)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVB2244 BARITONE HORN (1)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVB2255 TUBA (1)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVB2321 PRINCIPAL TRUMPET II (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVB2322 PRINCIPAL FRENCH HORN II (1)**
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVB2323 PRINCIPAL TROMBONE II (1)
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVB2324 PRINCIPAL BARITONE HORN II (1)
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVB2325 PRINCIPAL TUBA II (1)
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVJ1010 PRE-PRINCIPAL JAZZ PIANO (1)
College preparatory applied instruction in jazz 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. Corequisite: MVK1211 or MVK2221. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVJ1011 PRE-PRINCIPAL JAZZ VOICE (1)
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVJ1210 JAZZ PIANO / SECONDARY (1)
One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course
(MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVJ1211 JAZZ VOICE SECONDARY (1)
One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

This course can be used for the AA degree.

MVJ1213 JAZZ GUITAR / SECONDARY (1)
One half-hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVJ1214 ELECTRIC BASS / SECONDARY (1)
One hour lesson weekly and two hours of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVJ1219 JAZZ PERCUSSION (1)
One half hour lesson weekly and one hour practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=100.00

MVJ1310 PRINCIPAL JAZZ PIANO I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

MVJ1311 PRINCIPAL JAZZ VOICE I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

MVJ1313 PRINCIPAL JAZZ GUITAR I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

MVJ1314 PRINCIPAL ELECTRIC BASS I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

MVJ1319 PRINCIPAL JAZZ PERCUSSION I (1)
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 MVJ2221. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

MVJ2220 JAZZ PIANO (1)
One half lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVJ2223 JAZZ GUITAR (1)
One half lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVJ2224 ELECTRIC BASS (1)
One half lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVJ2229 JAZZ PERCUSSION (1)
MVJ2320 PRINCIPAL JAZZ PIANO II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVJ2323 PRINCIPAL JAZZ GUITAR II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVJ2324 PRINCIPAL ELECTRIC BASS II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVJ2329 PRINCIPAL JAZZ PERCUSSION II (1)
Applied instruction in jazz 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. Corequisite: MVK1211 or MVK2221. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

MVK1011 PRE-PRINCIPAL PIANO (1)
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.
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.
MVK1313 PRINCIPAL ORGAN I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVK2221 PIANO (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVK2223 ORGAN (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVK2321 PRINCIPAL PIANO II (1)
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.
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVK2323 PRINCIPAL ORGAN II (1)
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.
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVO1070 APPLIED MUSIC JAZZ COACHING (1)
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.
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVP1011 PRE-PRINCIPAL PERCUSSION (1)
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. Corequisite: MVK1211 or MVk2221. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVP1211 PERCUSSION (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVP1311 PRINCIPAL PERCUSSION I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVP2221 PERCUSSION (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVP2321 PRINCIPAL PERCUSSION II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
MVS1011 PRE-PRINCIPAL VIOLIN (1)
College preparatory applied instruction in violin 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS1012 PRE-PRINCIPAL VIOLA (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS1013 PRE-PRINCIPAL CELLO (1)
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: MVK1211 or MVK2221. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS1014 PRE-PRINCIPAL STRING BASS (1)
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 (MUx) course other than Music Appreciation. Corequisite: MVK1211 or MVK2221. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS1015 PRE-PRINCIPAL HARP (1)
College preparatory applied instruction in harp 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS1016 PRE-PRINCIPAL CLASSICAL GUITAR (1)
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 (MUx) course other than Music Appreciation. Corequisite: MVK1211 or MVK2221. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

MVS1116 GUITAR CLASS (1)
Class instruction in beginning classical guitar techniques.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

MVS1211 VIOLIN (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVS1212 VIOLA (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVS1213 CELLO (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVS1214 STRING BASS (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVS1215 HARP (1)
One half hour lesson weekly, and one hour of practice daily. Course scheduled on demand. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVS1216 CLASSICAL GUITAR (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVS1311 PRINCIPAL VIOLIN I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS1312 PRINCIPAL VIOLA I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS1313 PRINCIPAL CELLO I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

MVS1314 PRINCIPAL STRING BASS I (1)
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

MVS1315 HARP (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS1316 PRINCIPAL CLASSICAL GUITAR I (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

MVS2126 GUITAR CLASS (1)
Class instruction in intermediate guitar techniques.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

MVS2221 VIOLIN (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVS2222 VIOLA (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

MVS2223 CELLO (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.
### MVS2224 STRING BASS (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

### MVS2225 HARP SECONDARY (1)
One half hour lesson weekly, and one hour practice daily. Course scheduled on demand. Corequisite: Any music course (MUx) other than Music Appreciation.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

### MVS2226 CLASSICAL GUITAR (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

### MVS2321 PRINCIPAL VIOLIN II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

### MVS2322 PRINCIPAL VIOLA II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

### MVS2323 PRINCIPAL CELLO II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

### MVS2324 PRINCIPAL STRING BASS II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

### MVS2325 PRINCIPAL SOPHOMORE HARP (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

### MVS2326 PRINCIPAL CLASSICAL GUITAR II (1)
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

### MVV1011 PRE-PRINCIPAL VOICE (1)
College preparatory applied instruction in 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 MVK221. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=50.00
This course can be used for the AA degree.

### MVV1111 VOICE CLASS (1)
Fundamentals of voice production and building of solo repertoire. Term I, II and III.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=50.00

### MVV1211 VOICE (1)
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course
(MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVV1311 PRINCIPAL VOICE I (1)**
Applied instruction in 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVV2221 VOICE (1)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVV2321 PRINCIPAL VOICE II (1)**
Applied instruction in voice 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVW1011 PRE-PRINCIPAL FLUTE (1)**
College preparatory applied instruction in flute 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVW1012 PRE-PRINCIPAL OBOE (1)**
College preparatory applied instruction in oboe 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVW1013 PRE-PRINCIPAL CLARINET (1)**
College preparatory applied instruction in clarinet 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVW1014 PRE-PRINCIPAL BASSOON (1)**
College preparatory applied instruction in bassoon 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVW1015 PRE-PRINCIPAL SAXOPHONE (1)**
College preparatory applied instruction in saxophone 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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00
This course can be used for the AA degree.

**MVW1211 FLUTE (1)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVW1212 OBOE (1)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVW1213 CLARINET (1)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. *This course can be used for the AA degree.*

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVW1214 BASSOON (I)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. *This course can be used for the AA degree.*

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVW1215 SAXOPHONE (I)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation.

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

This course can be used for the AA degree.

**MVW1311 PRINCIPAL FLUTE I (I)**
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

**MVW1312 PRINCIPAL OBOE I (I)**
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

**MVW1313 PRINCIPAL CLARINET I (I)**
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

**MVW1314 PRINCIPAL BASSOON I (I)**
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. Corequisite: MVK1211

Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100.00

This course can be used for the AA degree.

**MVW1315 PRINCIPAL SAXOPHONE I (I)**
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. Corequisite: MVK1211

This course can be used for the AA degree.

**MVW2221 FLUTE (I)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. *This course can be used for the AA degree.*

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVW2222 OBOE (I)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. *This course can be used for the AA degree.*

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVW2223 CLARINET (I)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. *This course can be used for the AA degree.*

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVW2224 BASSOON (I)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course (MUx) other than Music Appreciation. *This course can be used for the AA degree.*

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50.00

**MVW2225 SAXOPHONE (I)**
One half hour lesson weekly and one hour of practice daily. Corequisite: Any music course
(MUx) other than Music Appreciation. This course can be used for the AA degree.

Lec Hrs=0 Lab Hrs=8 Oth Hrs=0 Fees=50. 00

**MVW2321 PRINCIPAL FLUTE II (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

**MVW2322 PRINCIPAL OBOE II (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

**MVW2323 PRINCIPAL CLARINET II (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

**MVW2324 PRINCIPAL BASSOON II (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00
This course can be used for the AA degree.

**MVW2325 PRINCIPAL SAXOPHONE II (1)**
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. Corequisite: MVK1211
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=100. 00

This course can be used for the AA degree.

**NMT1002 INTRODUCTION TO NUCLEAR MEDICINE TE (3)**
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. Pre or Corequisite: NMT1002L
NMT1430
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=42. 00

**NMT1002L INTRODUCTION TO NUCLEAR MEDICINE LA (1)**
The student will be introduced to aspects of the healthcare field and the fundamentals of nuclear medicine by applying the skills learned in Introduction to Nuclear Medicine to fully prepare the student for the hospital and/or clinical site. Pre or Corequisite: NMT1002 NMT1430
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=42. 00

**NMT1430 RADIATION SAFETY AND RADIOBIOLOGY (3)**
This course is designed to educate students on the biological effects of radiation and also informs the student on the local, state and federal regulations regarding radiation protection and safety for themselves, others and the environment. The students will learn how to follow appropriate protection procedures; dose limits, the long and short term effects of radiation, and how to handle and dispose of radioactive materials; and practice personnel monitoring of radiation exposure. Pre or Corequisite: NMT1002
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=42. 00

**NMT1630 NUCLEAR MEDICINE PHYSICS AND MATHEM (3)**
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. Prerequisite: NMT1002 NMT1430
NMT1714 NUCLEAR MEDICINE PATHOLOGY (2)
This course introduces the student to general pathological conditions with emphasis on those commonly seen in the field of nuclear medicine. Basic anatomy is reviewed in correlation to pathophysiology of disease. Descriptions of how diseases are classified, diagnosed and treated, as well as the natural course/prognosis of these diseases are presented. Topics will include; Pathogenesis, disease classification systems, and the study of specific disease of the respiratory, skeletal, gastrointestinal, hepatobiliary, urinary, cardiovascular & hematopoietic, nervous, endocrine and reproductive systems with nuclear medicine imaging considerations. Prerequisite: NMT1002 NMT1430

Corequisite: NMT1630 NMT1804
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NMT1804 NUCLEAR MEDICINE CLINICAL EDUCATION (2)
This course introduces the student to general pathological conditions with emphasis on those commonly seen in the field of nuclear medicine. Basic anatomy is reviewed in correlation to pathophysiology of disease. Descriptions of how diseases are classified, diagnosed and treated, as well as the natural course/prognosis of these diseases are presented. Topics will include; Pathogenesis, disease classification systems, and the study of specific disease of the respiratory, skeletal, gastrointestinal, hepatobiliary, urinary, cardiovascular & hematopoietic, nervous, endocrine and reproductive systems with nuclear medicine imaging considerations. Prerequisite: NMT1002 NMT1002L NMT1430

Corequisite: NMT1630 NMT1714
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NMT2061 NUCLEAR MEDICINE SEMINAR (3)
This course challenges the student with comprehensive testing, discussions and refinement of their accumulated knowledge of all aspects of Nuclear Medicine technology in preparation for the National Board Examinations. Prerequisite: NMT2102 NMT2534 NMT2723 NMT2723L NMT2960
Pre or Corequisite: NMT2844
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NMT2102 NUCLEAR MEDICINE ADMINISTRATION (1)
The student will be introduced to the administrative duties required of a Nuclear Medicine Technologist. Upon completion, the student will attain knowledge of proper resume building skills, interviewing skills, stress management and overall successful in the healthcare field. Prerequisite: NMT2130 NMT2713 NMT2779

Pre or Corequisite: NMT2534 NMT2834 NMT2960
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NMT2130 NUCLEAR MEDICINE RADIOPHARMACY (2)
This course will educate the student upon all aspects of all the radiopharmaceuticals used in Nuclear Medicine and PET. The student will understand how radiopharmaceuticals are produced, to maintain radiopharmaceuticalal records; obtain a generator eluate; prepare radiopharmaceuticals and perform quality control tests on them; dispose of radioactive waste appropriately; demonstrate an understanding of ordering pharmaceuticals in appropriate dosage and at an effective time frame. Prerequisite: instructor approval Pre or Corequisite: NMT2713 NMT2713L NMT2779
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NMT2534 NUCLEAR MEDICINE INSTRUMENTATION (2)
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. Prerequisite: NMT2130 NMT2713 NMT2779

Pre or Corequisite: NMT2102 NMT2834 NMT2960
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NMT2713 NUCLEAR MEDICINE METHODOLOGY I (2)
This is the first of a series of 2 courses which thoroughly educates the student upon 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. Pre or Corequisite: NMT2824 NMT2130 NMT2713L NMT2779
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NMT2713L NUCLEAR MEDICINE METHODOLOGY I LAB (1)
This is the first of a series of 2 laboratories which allows the student to apply their knowledge of the material they learn in Methodology I and enhance the student's familiarity within the clinical setting. Pre or Corequisite: NMT2824 NMT2130 NMT2713 NMT2779
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=34.00

NMT2723 NUCLEAR MEDICINE METHODOLOGY II (2)
This course enhances the student's knowledge attained from Methodology I by learning the remaining nuclear medicine procedures in order to be able to properly execute all procedures successfully. The student will also demonstrate knowledge of any remaining PET imaging procedures not discussed in Methodology I. Prerequisite: NMT2130 NMT2713

Pre or Corequisite: NMT2534 NMT2723L NMT2834
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NMT2723L NUCLEAR MEDICINE METHODOLOGY II LAB (1)
This is the second of a series of 2 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. Prerequisite: NMT2130 NMT2713L

Pre or Corequisite: NMT2723 NMT2834 NMT2960
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=34.00

NMT2779 INTRODUCTION TO MULTIPLE MODALITIES (2)
This course educates the student upon 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. Pre or Corequisite: NMT2824 NMT2130 NMT2713 NMT2713L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NMT2824 NUCLEAR MEDICINE CLINICAL EDUCATION (3)
Second in a five-course sequence of supervised clinical instruction in nuclear medicine technology. In addition to topics covered in NMT1814, the student is expected to perform routine quality control and quality assurance procedures. Students must complete patient care competencies as determined by the program. Pre or Corequisite: NMT2130 NMT2713 NMT2713L NMT2779
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=28.00

NMT2834 NUCLEAR MEDICINE CLINICAL EDUCATION (3)
Fourth in a five-course sequence of supervised clinical education courses in nuclear medicine
technology. In addition to topics covered in previous clinical education courses, the student is expected to perform most, if not all, quality control procedures and imaging procedures. The student should be progressing toward refinement with clinical experience and expanded knowledge. Students must continue to successfully complete the required number of competencies as stated in the clinical handbook for the respective semester. Pre or Corequisite: NMT2534 NMT2723 NMT2960

Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=49.43

NMT2844 NUCLEAR MEDICINE CLINICAL EDUCATION (2)
Fifth in a five-course sequence of supervised clinical instruction in nuclear medicine technology. In addition to topics covered in all previous clinical education courses, the student is expected to perform all quality control and imaging procedures. Students must successfully complete all required competencies and random terminal competencies when asked upon. Prerequisite: NMT2534 NMT2723 NMT2834 NMT2960

Corequisite: NMT2061
Lec Hrs=0 Lab Hrs=0 Oth Hrs=256 Fees=90.18

NMT2905 INDEPENDENT STUDY IN NUCLEAR MEDICINE (3)
A directed independent study course in Nuclear Medicine. The course is available to only majors who wish to investigate specific clinical education situations. The student will make an application for the course to the Program Manager.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=128 Fees=61.18

NMT2960 NUCLEAR MEDICINE ADVANCE APPLICATIO (2)
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. Prerequisite: NMT2130 NMT2713 NMT2713L

Pre or Corequisite: NMT2534 NMT2834

NUR1020 NURSING PROCESS I (3)
A theoretical course for the beginning nursing student. Nursing process provides the students with the fundamentals of nursing including such basic skill as health assessment, health teaching, and legal aspects of nursing practice, communication techniques, the nursing process, 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, sleep and rest, sensory, grief and loss, and self-concept and the nurse’s role in assisting a person meet these needs, while sensitive to cultural diversity, human dignity, and developmental progression. Prerequisite: BSC2086 BSC2086L CHM1032 ENCI101
Pre or Corequisite: HSC1149 MTB1370 NUR1020L

NSP2781 REFRESHER NURSE UPDATE (5)
This course has been developed to review current theory in relation to nursing practice so that the inactive R. N. may be able to move with confidence into a staff nurse orientation and return to practice. The material presented will emphasize trends in nursing practice and nursing education today, changes in the fundamentals of nursing skills necessary for providing effective nursing care in a variety of situations. A reasonable comprehensive review of the up-to-date nursing management of the adult patient with a medical surgical problem will be presented. Prerequisite: Current Florida RN license, current BCLS-C certificate, professional liability insurance, physical examination and recency of work experience. Pre or Corequisite: NSP2781L
Lec Hrs=80 Lab Hrs=0 Oth Hrs=0 Fees=12.00

NSP2781L REFRESHER NURSE UPDATE PRACTICUM (5)
This course will provide various laboratory and clinical experiences for the R. N. in providing patient care, team leading, and exposure to nursing care in the specialty areas. Pre or Corequisite: NSP2781
Lec Hrs=0 Lab Hrs=0 Oth Hrs=160 Fees=111.18

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00
NUR1020L NURSING PROCESS I CLINICAL LAB (2)
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. Pre or Corequisite: HSC1149 MTB1370 NUR1020
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=121.18

NUR1210 NURSING PROCESS II (3)
The second in a series of theoretical courses for the beginning nursing student. This course builds on previously learned concepts and introduces more sophisticated nursing interventions related to medication administration, care of patient experiencing alterations in the basic needs of nutrition, elimination, comfort, fluid and electrolyte balance, oxygenation, mobility, asepsis, and care of the surgical patient. Prerequisite: MTB1370 NUR1020 NUR1020L
Pre or Corequisite: HSC1149 NUR1210
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR1210L NURSING PROCESS II CLINICAL LAB (2)
The second in a series of clinical courses building on previously learned concepts while incorporating more sophisticated nursing interventions related to medication administration, care of patients experiencing alterations in the basic needs of nutrition, elimination, comfort, fluid and electrolyte balance, oxygenation, mobility, asepsis, and care of the surgical patient. Course activities focus on nursing care of the adult patient experiencing medical/surgical situations. Prerequisite: MTB1370 NUR1020 NUR1020L
Pre or Corequisite: HSC1149 NUR1210
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=136.18

NUR1220 HEALTH ALTERATIONS I (3)
Health Alterations I is a course designed to provide the student with knowledge of alterations of ingestion, digestion, metabolism, and elimination throughout the life cycle. The major focus is directed at meeting the health care needs of the adult and pediatric patient through utilization of the nursing process. The student will be expected to integrate principles of anatomy, physiology, and pathophysiology of the digestive and genito urinary systems into the nursing process. Components of pharmacology and nutrition will be included in this course. Consideration will also be given to the psychosocial aspects of the wellness/illness continuum. Prerequisite: HSC1149 NUR1210 NUR1210L
Pre or Corequisite: NUR1220L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR1220L HEALTH ALTERATIONS I CLINICAL LAB (2)
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. Prerequisite: HSC1149 NUR1210 NUR1210L
Pre or Corequisite: NUR1220
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=120.18

NUR1304L TRANSITION PEDIATRIC NURSING CLINIC (1)
This clinical course provides the LPN student with an understanding of growth and development through the stages of childhood and the application of the nursing process through these stages. Prerequisite: NUR1220 NUR1220L
Pre or Corequisite: NUR1310
Lec Hrs=0 Lab Hrs=0 Oth Hrs=56 Fees=119.18

NUR1310 PEDIATRIC NURSING (3)
This pediatric course is designed to provide an understanding of growth and development through the stages of childhood and the application of the nursing process to these stages. Prerequisite: NUR1220 NUR1220L

Pre or Corequisite: NUR1310L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**NUR1310L PEDIATRIC NURSING LAB (2)**
This clinical course provides the student with an understanding of growth and development through the stages of childhood and the application of the nursing process to these stages. Prerequisite: NUR1220 NUR1220L

Pre or Corequisite: NUR1310
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=119. 18

**NUR1400L TR HLTHCARE OF WOMEN CLINICAL LAB (1)**
This clinical course is for the LPN student and will enable students to apply the nursing process in providing nursing care to the maternity patient, her family, and the fetus/newborn during antepartal, intrapartal and postpartal periods. Consideration is given to the multiple factors which complicate the normal physiological or psychological process of the childbearing period. Prerequisite: NUR1220 NUR1220L

Pre or Corequisite: NUR1421
Lec Hrs=0 Lab Hrs=0 Oth Hrs=56 Fees=120. 18

**NUR1421 HEALTH CARE OF WOMEN (3)**
Health care of women is a course designed to provide the student with the knowledge of the reproductive system and health care needs of women throughout the life cycle. The major focus is directed to the childbearing portion of the life cycle. The student is expected to utilize the nursing process in providing nursing care to the maternity patient, her family, and the fetus/newborn during antepartal, intrapartal and postpartal periods. Consideration is given to the multiple factors which complicate the normal physiological or psychological process of the childbearing period. Prerequisite: NUR1220 NUR1220L

Pre or Corequisite: NUR1421L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**NUR1421L HEALTH CARE OF WOMEN CLINICAL LABOR (2)**
Health Care of Women is a clinical course designed to provide the student with the knowledge of the reproductive system and health care needs of women throughout the life cycle. The major focus is directed to the childbearing portion of the life cycle. The student is expected to utilize the nursing process in providing nursing care to the maternity patient, her family, and the fetus/newborn during antepartal, intrapartal and postpartal periods. Consideration is given to the multiple factors which complicate the normal physiological or psychological process of the childbearing period. Prerequisite: NUR1220 NUR1220L

Pre or Corequisite: NUR1421
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=120. 18

**NUR1500L TRANSITION PSYCHIATRIC NURSING CLIN (1)**
This clinical course provides the LPN student with a definition and understanding of psychiatric nursing. The nursing process is utilized to present pathological condition. Therapeutic modalities are included. Prerequisite: NUR1220 NUR1220L

Pre or Corequisite: NUR1520
Lec Hrs=0 Lab Hrs=0 Oth Hrs=56 Fees=120. 18

**NUR1520 NURSING CARE OF THE PSYCHIATRIC PAT (3)**
This course provides the student with a definition and understanding of psychiatric nursing. The nursing process is utilized to present pathological conditions. Therapeutic modalities are included. Prerequisite: NUR1220 NUR1220L

Pre or Corequisite: NUR1520L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

**NUR1520L NURSING CARE OF THE PSYCHIATRIC PAT (2)**
This clinical course provides the student with a definition and understanding of the psychiatric
nursing. The nursing process is utilized to present pathological conditions. Therapeutic modalities are included. Prerequisite: NUR1220 NUR1220L.

Pre or Corequisite: NUR1520
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=120. 18

NUR2000 TRANSITION NURSING I (2)
This theoretical course for the LPN covers the following concepts: nursing process, legal aspects of nursing, communication techniques, computer concepts, and the role of the ADN registered nurse. Prerequisite: BSC2086 BSC2086L CHM1032 ENC1101
Pre or Corequisite: HSC1149 MTB1370 NUR2000L.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NUR2000L TRANSITION NURSING I CLINICAL LAB (2)
The student shall be responsible for providing care of a selected group of patients, being aware of legal and ethical issues pertinent to their care and effecting change as necessary. It will be essential for the student to examine his/her own values and methods of communication in attempting to problem-solve patient situations. Observational experiences, written assignments, and performance exams may be included in this course. Prerequisite: BSC2086 BSC2086L CHM1032 ENC1101
Pre or Corequisite: HSC1149 MTB1370 NUR2000
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=119. 18

NUR2221 HEALTH ALTERATIONS II (3)
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. Prerequisite: NUR1310 NUR1310L NUR1421 NUR1421L NUR1520 NUR1520L Pre or Corequisite: NUR2221
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=134. 18

NUR2222 HEALTH ALTERATIONS III (3)
This course is designed to provide the student with the knowledge necessary to implement the nursing process on patients with cardiopulmonary dysfunction throughout the life cycle. The focus is the pathophysiology, common medical, diagnostic and treatment modes, nursing assessments and interventions necessary to treat those patients. The students will be responsible for reviewing anatomy and physiology, pharmacology, pediatric and psychiatric principles as they apply to this course. Prerequisite: NUR2221 NUR2221L.
Pre or Corequisite: NUR2222L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NUR2222L HEALTH ALTERATIONS III CLINICAL LAB (2)
In this course the student will be responsible for applying the nursing process to assigned patients with alterations in cardiopulmonary functioning. This experience will require both clinical and written assignments. Evaluation will be based on the application of the nursing process to assigned patients. Prerequisite: NUR2221 NUR2221L.
Pre or Corequisite: NUR2222
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=123. 18

NUR2801 TRANSITION NURSING IV (3)
This theoretical course for the LPN covers the following concepts: leadership, team management, legal ethical situations, problem solving techniques, interviewing techniques and emergency nursing. Prerequisite: NUR2222 NUR2222L.
Pre or Corequisite: NUR2801L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR2801L TRANSITION NURSING IV CLINICAL LAB (2)
This course for the LPN provides clinical opportunities to develop leadership skills, team management skills, and legal, ethical responsibilities. Prerequisite: NUR2222 NUR2222L

Pre or Corequisite: NUR2801
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=388.18

NUR2811L TRENDS, PRACTICES, AND ROLES (3)
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. Prerequisite: NUR2222 NUR2222L

Pre or Corequisite: NUR2811L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR2811L TRENDS, PRACTICES, AND ROLES CLINIC (2)
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. Prerequisite: NUR2222 NUR2222L

Pre or Corequisite: NUR2811
Lec Hrs=0 Lab Hrs=0 Oth Hrs=112 Fees=429.18

NUR3069L ADVANCED HEALTH ASSESSMENT LAB (1)
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. Pre or Corequisite: NUR3069L NUR3678 NUR3805
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR3069 ADVANCED HEALTH ASSESSMENT (2)
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. Pre or Corequisite: NUR3069L NUR3678 NUR3805
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=194.18

NUR3119 NURSING CONCEPTS AND THEORIES (3)
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. Prerequisite: NUR3069 NUR3069L NUR3805

Pre or Corequisite: NUR3167 NUR4165
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NUR3167 NURSE AS A SCHOLAR (3)
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. Prerequisite: NUR3069 NUR3069L NUR3805

Pre or Corequisite: NUR3119 NUR4165
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NUR3678 NURSING CARE OF VULNERABLE POPULATIONS (3)
Caring for the vulnerable is an 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 sociocultural 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. Prerequisite: STA2023

Pre or Corequisite: NUR3069 NUR3069L NUR3805
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NUR3805 NURSING, ROLES, DIMENSIONS, AND PER (3)
The discipline of Nursing has been identified as having the potential for making a major impact on the transformation of health care delivery to a safer, quality, and more cost effective system, thus improving healthcare outcomes across populations. This course facilitates the transition of the Registered Nurse with an Associate Degree in Nursing or diploma to the role of the BSN graduate. It encompasses the history, evaluation, ethical imperatives, trends and issues impacting the nursing profession in evolving and global health delivery environments. It explores the responsibilities and values of the nursing profession, communication theories and techniques, teaching learning concepts, critical thinking and clinical reasoning and judgment. Prerequisite: STA2023

Pre or Corequisite: NUR3069 NUR3069L NUR3805
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

NUR4195 END OF LIFE PALLIATIVE CARE (3)
This course is designed to recognize death as the last stage of human growth and development. With a focus on the physical, emotional, psychosocial, spiritual, and cultural considerations at the end-of-life, the student will explore ethical and legal issues to enhance their skills and knowledge when working with patients and families at the end-of-life. Lec Hrs=32 Lab Hrs=0 Oth Hrs=48 Fees=0. 00

NUR4284 DYNAMICS AND CONTEMPORARY ISSUES IN (3)
The aging population will affect the skills and services the healthcare workforce must be equipped to provide and the settings in which the care is provided. This course will provide an in-
depth understanding of the concepts in normal aging, issues related to the client in communities, and health care issues confronted by the elderly. The impact of the elderly on society, end-of-life issues, the application of current theories and evidence of elderly, and available and potential health care systems and services are explored. Prerequisite: NUR3069 NUR3069L NUR3805 STA2023
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR4636 COMMUNITY HEALTH NURSING (3)
The community based nurse cares for clients from many diverse cultures and must be prepared to give quality, effective, and culturally competent health care in a variety of settings and specialties. This course focuses on the role of the nurse in the community and emphasizes concepts and theories related to community health nursing. Community nursing addresses cultural, social, and epidemiological factors relative to health and illness, health promotion and disease prevention across the lifespan and families of diverse populations. Prerequisite: NUR3069 NUR3069L NUR3119 NUR3678 NUR3805 NUR4165 NUR4284 Pre or Corequisite: NUR4636L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR4636L COMMUNITY HEALTH NURSING PRACTICUM (2)
This course presents clinical concepts of community health nursing focusing on the community as client and the multiple determinants of health in community health settings. The learner will participate in selected community based clinical activities and various community agencies as a interdisciplinatory 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. Prerequisite: NUR3069 NUR3069L NUR3119 NUR3167 NUR3678 NUR3805 NUR4165 NUR4284 Pre or Corequisite: NUR4636
Lec Hrs=0 Lab Hrs=0 Oth Hrs=96 Fees=101.18

NUR4667 NURSING PERSPECTIVES AND GLOBAL TRE (3)
This course examines the knowledge and skills of baccalaureate nursing students' perspectives on global health trends. This information helps to facilitate the awareness and knowledge of increased globalization affecting health care and its delivery. The incorporation of ethical considerations and cultural sensitivity into nursing practice has become a greater need as a result of an increasingly diverse, multicultural, globally oriented world. Information covering the overall socio-political and economical health care environment changes occurring in the 21st century health care system is addressed. Prerequisite: NUR3069 NUR3069L NUR3805
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR4826 ETHICAL AND LEGAL ASPECTS OF NURSING (3)
This course focuses on the ethical and legal aspects of nursing; exploring ethical issues, ethical decision making, and legal accountability in various populations.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR4827 PRINCIPLES OF NURSING LEADERSHIP AN (3)
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. Prerequisite: NUR3069 NUR3119 NUR3167 NUR3678 NUR3805 NUR4165 NUR4284 Pre or Corequisite: NUR4636 NUR4636L NUR4667
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR4870 NURSING INFORMATICS (3)
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 healthcare environments and the potential use of social networking tools used to communicate health related information. Prerequisite: CGS1060C.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR4945 NURSING CAPSTONE (2)
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. Prerequisite: NUR4284 NUR4636 NUR4636L NUR4827
Corequisite: NUR4945L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

NUR4945L NURSING CAPSTONE PRACTICUM (2)
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. Prerequisite: NUR4284 NUR4636 NUR4636L NUR4827
Corequisite: NUR4945
Lec Hrs=0 Lab Hrs=0 Oth Hrs=96 Fees=61.18

OCE1001 INTRODUCTORY OCEANOGRAPHY (3)
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OCE1001L OCEANOGRAPHY LABORATORY (1)
Laboratory methods for the Ocean Sciences. 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. Pre or Corequisite: OCE1001
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=24.00

OPT1110 PHYSICAL AND GEOMETRIC OPTICS (3)
This course provides a review of light energy as it passes through air, plastic, glass and water with emphasis on how light is modified by prisms and curved lens surfaces. These principles relate to the effect these ophthalmic devices have in correcting the errors of human vision. Pre or Corequisite: OPT1110L OPT1210 OPT1330
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OPT1110L PHYSICAL AND GEOMETRIC OPTICS LAB (1)
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. Pre or Corequisite: OPT1110 OPT1210 OPT1330
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=7.00

OPT1150 OPHTHALMIC LENSES (2)
Characteristics of single vision and multifocal lens reference points for proper lens selection to meet visual needs of the patients. Emphasis is 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. Prerequisite: OPT1110 OPT1110L OPT1210

Corequisite: OPT1150L OPT2090
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OPT1150L OPHTHALMIC LENSES LAB
(2)
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. Prerequisite: OPT1110 OPT1110L OPT1210

Pre or Corequisite: OPT1150
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=7.00

OPT1210 ANATOMY AND PHYSIOLOGY
OF THE EYE (3)
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. Pre or Corequisite: OPT1110 OPT1110L OPT1330

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OPT1330 ORIENTATION TO VISION
CARE (2)
This course reviews the techniques needed in a clinical environment for the collection of patient case history, entrance visual acuity, basic visual skills of ocular motility and accommodation, color discrimination, depth perception and binocular fusion. Emphasis is placed on medical terminology as it relates to the visual system. Pre or Corequisite: OPT1110 OPT1110L OPT1210

Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OPT1450 OPHTHALMIC DISPENSING (2)
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 are highlighted. Prerequisite: OPT1150 OPT1150L OPT2090 OPT2879
Pre or Corequisite: OPT1450L OPT2500 OPT2500L OPT2800L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OPT1450L OPHTHALMIC DISPENSING
LAB (2)
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 are highlighted. Prerequisite: OPT1150 OPT1150L OPT1330 OPT2375
Pre or Corequisite: OPT1450 OPT2500 OPT2500L OPT2800L
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=7.00

OPT2060 OPHTHALMIC MANAGEMENT
POLICY AND PR (3)
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. Prerequisite: OPT2800L OPT2875

Pre or Corequisite: OPT2876
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OPT2090 ORIENTATION TO VISION
CARE CLINIC (1)
This course provides an introduction to the Broward Community College Vision Care Clinic. Students will apply technical skills acquired in previous course work. Recording of clinical data, administrative procedures and techniques in

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patient handling under the close supervision of clinic instructors and 5th semester students. Prerequisite: OPT1110 OPT1210 OPT1330
Lec Hrs=0 Lab Hrs=0 Oth Hrs=32 Fees=0.00

OPT2375 REFRACTOMETRY (2)
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. Prerequisite: OPT1110 OPT1110L OPT1210
Pre or Corequisite: OPT1150 OPT1150L OPT1330 OPT2879
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OPT2420 EYEWEAR FABRICATION I (1)
This course presents a review of the theory of ophthalmic surfacing and finishing procedures. Students acquire knowledge to arrange single vision and multifocal lenses, use lensometers and lens clocks, operate project-o-markers for lens layout, select or fabricate frame patterns, and utilize several systems for surfacing and edging lenses for ophthalmic frames. Prerequisite: OPT2500 OPT2800L
Pre or Corequisite: OPT2420L
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

OPT2420L EYEWEAR FABRICATION I LAB (2)
In this laboratory course students will gain practical experience in ophthalmic surfacing and finishing procedures. Students will fabricate single vision and multifocal lenses: use lensometers and lens clocks: operate project-o-markers for lens layout: select or fabricate frame patterns: and utilize several systems for surfacing and edging lenses for ophthalmic frames. Prerequisite: OPT2500L OPT2879
Pre or Corequisite: OPT2420
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=11.00

OPT2460 OPHTHALMIC DISPENSING CLINIC I (2)
Development of skills in the fitting and dispensing of ophthalmic lenses. Students will work under the close supervision of clinical staff in dispensing glasses to patients of the Vision Care Clinic. Emphasis will be placed on techniques used to dispense new technology in ophthalmic frame materials; multifocal lenses including progressive power and occupational bifocals; and high index lenses. The process of analyzing the patient's prescription and identifying the patient's specific visual needs for proper frame and lens selection is highlighted. Prerequisite: OPT2375 OPT2500 OPT2800L
Pre or Corequisite: OPT2420 OPT2830L OPT2875
Lec Hrs=0 Lab Hrs=80 Oth Hrs=0 Fees=46.75

OPT2461 OPHTHALMIC DISPENSING CLINIC II (3)
This is a continuation of OPT2493L. 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. Corequisites: OPT2421, OPT2831, OPT2876. Prerequisite: OPT2420 OPT2460 OPT2875

Pre or Corequisite: OPT2421 OPT2831L OPT2876

Lec Hrs=0 Lab Hrs=0 Oth Hrs=120 Fees=28.43

**OPT2500 CONTACT LENS THEORY (2)**
This course provides a review of the theory and terminology of contact lenses including fitting, application and removal procedures, care of soft and hard lenses, verification of contact lens prescription and "in-office" modification of contact lenses. Prerequisite: OPT1150

Corequisite: OPT1450

Pre or Corequisite: OPT2500L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**OPT2500L CONTACT LENS THEORY LAB (2)**
This course provides a review of the practical procedures used to apply technical skills of contact fitting, application and removal procedures, care of soft and hard lenses, verification of contact lens prescription and "in-office" modification of contact lenses. Prerequisite: OPT1150L

Corequisite: OPT1450L

Pre or Corequisite: OPT2500
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=9.00

**OPT2800L VISION CARE CLINIC I (2)**
This course provides a review of the practical procedures used to apply technical skills of contact fitting, application and removal procedures, care of soft and hard lenses, verification of contact lens prescription and "in-office" modification of contact lenses. Prerequisite: OPT1150 OPT1150L

Corequisite: OPT1450L OPT2500L

Pre or Corequisite: OPT2375 OPT2879
Lec Hrs=0 Lab Hrs=0 Oth Hrs=80 Fees=68.18

**OPT2830L CONTACT LENS CLINIC I (2)**
Assist eye care specialists in the fitting and follow-up care of rigid and soft contact lenses for patients referred from the Vision Care Clinic. Familiarization with over-refraction, instructions for lens handling, cleaning, care and storage, and basic contact lens pathology. Prerequisite: OPT2500 OPT2500L OPT2800L

Pre or Corequisite: OPT2420 OPT2460 OPT2875
Lec Hrs=0 Lab Hrs=0 Oth Hrs=120 Fees=68.18

**OPT2831L CONTACT LENS CLINIC II (2)**
This course involves the use of contact lens instruments to confirm all parameters for replacement lenses. Particular attention is given to the patient who is having problems with contact lenses after long-term wear due to corneal changes and sensitivity to solutions. Advanced over-refraction and contact lens fitting procedures are practiced. Prerequisite: OPT2420L OPT2460 OPT2830L

Pre or Corequisite: OPT2421 OPT2461 OPT2876
Lec Hrs=0 Lab Hrs=0 Oth Hrs=80 Fees=68.18

**OPT2875 OPHTHALMIC DISPENSING PRACTICUM I (2)**
In this laboratory course students will fabricate eyewear for the patients of the Vision Care Clinic using advanced techniques in measurement, fabrication and verification of single vision and multifocal lenses. Advanced techniques in the operation and maintenance of manual and computerized equipment. Prerequisite: OPT2375 OPT2500 OPT2800L OPT2879

Pre or Corequisite: OPT2420 OPT2420L OPT2830L

Lec Hrs=0 Lab Hrs=0 Oth Hrs=120 Fees=66.18

**OPT2876 OPHTHALMIC DISPENSING PRACTICUM II (2)**
This is an externship in an approved retail ophthalmic dispensing establishment involving frame styling, ordering of appropriately designed lenses, adjustment, repair and dispensing of
eyewear. The student will gain a working knowledge of administrative management procedures of the practice. Prerequisite: OPT2420 OPT2830L OPT2875

Pre or Corequisite: OPT2060 OPT2421 OPT2461
Lec Hrs=0 Lab Hrs=0 Oth Hrs=120 Fees=66. 18

OPT2879 REFRACOMETRY PRACTICUM (2)
Practicum for OPT2375. Practical procedures used in determining the powers of corrective lenses in relation to a patient's refractive error. The student will learn to use the Phoropter, retinoscope, and automated refraction instruments in determining the patient's subjective and objective refraction. Problems associated with the change in refractive powers will be demonstrated. Prerequisite: OPT1110 OPT1110L OPT1210 OPT1330
Pre or Corequisite: OPT1150 OPT1150L OPT1330 OPT2375
Lec Hrs=0 Lab Hrs=0 Oth Hrs=96 Fees=66. 18

ORH1523 NATIVE UPLAND PLANTS (2)
This course includes the identification of approximately 100 plants and plant groups native or naturalized in the higher ground habitats of South Florida. The application of these plants as in-situ, mitigation or landscape materials in the ecological and esthetic situations of this area will be an additional objective. Most instruction will be done in the field utilizing local passive- and active-use parks. Completion of any landscape plant identification class, ORH1524, ORH1510, ORH2511 ORH2512 or ORH1101, is strongly recommended.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

ORH1524 NATIVE WETLAND PLANTS (2)
This course is a continuation of HOS1071, Native Upland Plants, and includes the identification of approximately 100 plants and plant groups native or naturalized in fresh and salt water wetlands of South Florida. The application of these plants as in-situ and mitigation species in ecological, landscape and esthetic situations will be done in the field.
Prerequisite: Instructor approval
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

OST1100C KEYBOARDING & DOCUMENT PROCESSING I (3)
This course offers an introduction to the keyboard with development of fundamental techniques, skill development, and simple correspondence and other business keyboarding and document processing. A minimum completion speed of 35 words per minute with a 3 error cutoff on 3 minute timed writing is required. This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=16 Oth Hrs=32 Fees=12. 00

OST1103C BASIC KEYBOARDING (1)
This course offers an introduction to the keyboard with development of fundamental techniques. Minimum completion speed of 25 words per minute with a 3-error cutoff on 3-minute timed writings using touch technique is required. This course can be used for the AA degree.
Lec Hrs=4 Lab Hrs=12 Oth Hrs=0 Fees=7. 00

OST1110C KEYBOARDING & DOCUMENT PROCESSING I (3)
This keyboarding course includes skill development which includes speed building, and accuracy improvement; with an emphasis on refining and creating business correspondence, forms, reports, and tables. Laboratory hours are required in addition to the scheduled course hours. A minimum completion speed of 45 words per minute with 4-error cutoff on 5-minute timed writings are required. Prerequisite: OST1100C
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=74. 00

OST1257C MEDICAL TERMINOLOGY FOR THE ADMINIS (3)
This course is designed to provide the student with an extensive study of medical terminology used in the various areas of the healthcare industry. Emphasis is placed on the building of medical terms from word parts.
Lec Hrs=12 Lab Hrs=36 Oth Hrs=0 Fees=20. 00

OST1330 BUSINESS ENGLISH (1)
This course provides a refresher course in punctuation and capitalization.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**OST1355 RECORDS MANAGEMENT (3)**
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.
Lec Hrs=24 Lab Hrs=24 Oth Hrs=0 Fees=31.00

**OST1795 TELECOMMUNICATIONS (1)**
A hands-on course utilizing the Internet. Course topics include telecommunications terminology, the use of the world wide web, bulletin boards, attachments, address books, bookmarks, search engines, history lists, browser programs and customizing the browser. E-mail etiquette, legal issues, and organizing and archiving e-mail are also investigated.
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**OST1811C DESKTOP PUBLISHING (3)**
This course provides hands-on applications with a popular desktop publishing package. Through the application of desktop publishing techniques, students plan, design and create documents. Effective typeface and use of graphics and color in a publication's design and function are also covered.
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00

**OST1831 WINDOWS / GRAPHICAL ENVIRONMENT (1)**
This course provides an introduction to the Windows Operating System. Students will learn the basic Windows commands including: My Computer, Explorer, Control Panel, Print Manager, WordPad, Paint, customizing the desktop, multi-tasking, and optimizing Windows.
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=0.00

**OST2053 SUCCESSFUL JOB SEARCH (1)**
This course presents a hands-on, interactive study of interview and employability skills and focuses on the keys to career success.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**OST2335 COMMUNICATIONS IN THE WORKFORCE (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=8.00
*This course can be used for the AA degree.*

**OST2431 LEGAL OFFICE TECHNIQUES I (3)**
This course provides an introduction to legal terminology, the typing of legal documents and pleadings, and office procedures for law firm employees.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
*This course can be used for the AA degree.*

**OST2432 LEGAL OFFICE TECHNIQUES II (3)**
A further study of legal terminology with emphasis on preparation of legal papers. Prerequisite: OST2431
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00
*This course can be used for the AA degree.*

**OST2455C MEDICAL BILLING AND CODING I (3)**
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. Prerequisite: OST1257C
Lec Hrs=12 Lab Hrs=36 Oth Hrs=0 Fees=0.00

**OST2456C MEDICAL BILLING AND CODING II (3)**
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
OST2464C MEDICAL OFFICE COMPUTER APPLICATION (3)
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.
Lec Hrs=40 Lab Hrs=8 Oth Hrs=0 Fees=40.00

OST2501 OFFICE MANAGEMENT (3)
This course is a study of the skills needed by the office professional in the workforce. It includes technology, the global economy, increased diversity, teamwork, and the changing skills and nature of work 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, and career planning and advancement are covered.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

OST2601 TRANSCRIBING MACHINES (3)
This course emphasizes skill development for accurate transcription of recorded dictation to office standard proficiency levels. Special materials related to each student's major subject areas of legal and medical are provided.
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00

OST2621L LEGAL OFFICE TRANSCRIPTION (3)
The student will study legal terminology, operate a transcribing machine efficiently, and proofread accurately. The student will apply the rules of spelling, grammar and punctuation to produce legal documents directly from transcription tapes.
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00

OST2764C ADVANCED WORD (3)
This course will provide specialized training on advanced word processing concepts and techniques. The major emphasis of this course will be the formatting of characters, paragraphs and documents, managing text flow, graphics, advanced table features, reference tools, mail merge and macros, and customizing Word. The skills developed by students completing this course will help prepare them for the Microsoft Certified Application Specialist (MCAS) exam. Prerequisite: Keyboarding speed of 40 words a minute, or Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=19.00

OST2949 CO OP WK EXP (3)
A course designed to provide training in a student's field of study through work experience. Students are graded on the basis of learning objectives and employer evaluations.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PAD2002 INTRODUCTION TO PUBLIC ADMINISTRATI (3)
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PCB3063 GENETICS (3)
This course is an introductory study of the principles of inheritance and the molecular genetics of both prokaryotes and eukaryotes. The main objective of this course is to provide the pre-professional science educator a broad understanding of molecular, transmission, population and quantitative genetics from both an historical and modern perspective. This course addresses specific Sunshine State Standards, subject matter competencies, and pedagogy pertinent to the discipline required for teacher
Certificate. Prerequisite: BSC2010 BSC2010L BSC2011 BSC2011L.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PCB4043 ECOLOGY (3)
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 the adaptations of organisms to the abiotic factors of the environment.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PEL1041C RECREATION ACTIVITIES (2)
An overview of outdoor and indoor games and activities for various age groups in a recreational setting.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PEM1116 FUNCTIONAL WELLNESS (2)
Functional Wellness emphasizes the importance of knowledge, attitudes, and practices relating to personal wellness. It is a course designed to expose students to a broad range of issues and information relating to the various aspects of personal wellness including physical, social, emotional, intellectual, spiritual and environmental wellness. This course integrates personal wellness and fitness in both a classroom and exercise environment, and may include Pilates, yoga, functional training, spinning and basic training. Evolving current topics such as nutrition, disease prevention, stress reduction, exercise prescription, and environmental responsibility are integrated to enable the student to understand the lifelong effects of healthy lifestyle choices.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=11.00

PEM1121 BEGINNING YOGA EXERCISES (1)
Students will learn proper exercise, relaxation and balance of both the body and mind. A holistic approach to health and stress management is emphasized. Coeducational.

Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=4.00
This course can be used for the AA degree.

PEM1131 WEIGHT TRAINING (2)
A course primarily designed and organized for students of all ages to optimize their wellness in each of the following six interrelated dimensions: physical wellness; intellectual wellness; emotional wellness; spiritual wellness; interpersonal/social wellness; environmental/planetary wellness. Students will learn how to assess and apply this information to their lives in order to contribute to the welfare of the community and environment with a specific emphasis on resistance training methods and techniques.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=11.00
This course can be used for the AA degree.

PEM1141 AEROBIC WELLNESS (2)
Aerobic Wellness emphasizes the importance of knowledge, attitudes, and practices relating to personal wellness. It is a course designed to expose students to a broad range of issues and information relating to the various aspects of personal wellness including physical, social, emotional, intellectual, spiritual and environmental wellness. This course integrates personal wellness and fitness in both a classroom and exercise environment. Students will incorporate and apply concepts of aerobic exercise and healthy living in ways that will contribute to the welfare of the community and the environment. This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=10.00

PEN1121 BEGINNING SWIMMING (1)
Coeducational.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=30.00
This course can be used for the AA degree.

PEN1171 AQUATIC WELLNESS (2)
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 course can be used for the AA degree.*

**Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=1.00**

**PEN1231 BEGINNING BASIC SAILING (1)**
The basic course includes certain fundamentals and techniques of Seamanship and Sail handling as would be necessary for the safe, enjoyable use of a sailboat. Coeducational. *This course can be used for the AA degree.*

**Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=26.00**

**PEN1241 WINDSURFING (1)**
This basic course includes the fundamentals and techniques of handling a Windsurfing Board that are necessary for safe and enjoyable use in this activity. Coeducational.

**Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=26.00**

**PEN2122 INTERMEDIATE SWIMMING (1)**
Coeducational.

**Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=29.00**

**PEN2136 SCUBA DIVING (1)**
This course offers competencies for the PADI basic SCUBA course. Students will learn fundamental skills of snorkeling and scuba diving, as well as theories and knowledge for safe diving. This course does include open water dives required for National Certification. Student must furnish their own mask, snorkel, scuba fins and PADI Open Water Crew Pack (wet suit is optional). The course will meet at Tigertail Lake.

**Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=71.00**

**PEO1011C TEAM SPORTS AND ACTIVITIES (2)**
An overview of team sports and activities. Concepts appropriate for a variety of ages.

**Lec Hrs=16 Lab Hrs=32 Oth Hrs=0 Fees=13.00**

**PEO1031C INDIVIDUAL SPORTS AND ACTIVITIES (2)**
An overview of individual sports and activities concepts appropriate for a variety of ages.

**PET1303 FOUNDATIONS OF EXERCISE SCIENCE (3)**
This course is designed to provide a foundational knowledge base which is common to all the different areas of fitness leadership. The didactic instruction lays the groundwork required by the fitness professionals in order to be analytical in their approach to safe and effective exercise programming for the public. Course content is heavy in the areas of anatomy and physiology as well as kinesiology, the science of human movement.

**Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**PET2622 CARE/PREVENTION/ATHLETIC INJURIES (2)**
Develops competence, knowledge and skill in the prevention and care of athletic injuries.

**Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00**

**PGY1801C PHOTOSHOP DESIGN (3)**
This is a graphic design course formulated to develop skills in digital imaging. Students will learn through the use of the computer how to create, edit and manipulate digital images from scanned photographs and artwork. Students will utilize retouching technique to modify, enhance and reshape images, apply special effects, adjust color balance, manage files, and prepare their work for print output and web/electronic presentation. The class is portfolio driven, training students to follow a business process for analyzing client needs, conducting research and developing a concept for production within a budget. Prerequisite: ART1300C

**Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=55.00**

**PGY1802C DIGITAL PHOTOGRAPHY (3)**
This is a Graphic Design course formulated to develop skills with a digital camera. Students will learn through the use of a digital camera how to
take photographs for use in the designs they create for print, web and multimedia. Students will learn to properly expose, compose, and use effective lighting in the making of photographs. The use of natural and artificial lighting will be used in portraiture, product and outdoor photography. Prerequisite: PGY1801C

PGY2401C PHOTOGRAPHY I (3)
Basic procedures of black and white still camera work, developing, and printing. There will be an emphasis on intensifying visual perception and analysis of photographs as an Art form. (Students will supply 35mm camera, film, and paper).
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=50.00
*This course can be used for the AA degree.*

PGY2404C PHOTOGRAPHY II (3)
This course is designed for the exploration of more advanced printing and shooting techniques. The students will be required to understand and apply techniques in medium format cameras, large focus cameras and studio lighting in order to achieve a cohesive body of work. (The use of 35mm is also included). Prerequisite: PGY2401C
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=50.00
*This course can be used for the AA degree.*

PGY2800C FINE ARTS DIGITAL PHOTOGRAPHY (3)
This course is a Visual Arts class formulated to introduce and develop some of the necessary skills that will enable the students to understand the basic principles of digital cameras, film scanners and digital printing and how to use them in the context of the visual language. It is a course designed for Visual Arts students which 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. An important part of the class will be lectures, slide presentations, and discussion of historical and contemporary issues dealing with conceptual and visual arguments. Critiques will be the forum where students present their ideas and discuss/verbalize concepts dealing with

Prerequisite: PGY2401C. *This course can be used for the AA degree.*

Lec Hrs=32 Lab Hrs=64 Oth Hrs=0 Fees=75.00

PGY2905 INDEPENDENT STUDY: PHOTOGRAPHY (3)
A directed, independent study course available to both majors and non-majors who wish to investigate a particular problem. During this course students will be asked to produce a cohesive body of work, technically and conceptually resolved. Prerequisite: PGY2401C
PGY2404C
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=47.00
*This course can be used for the AA degree.*

PHI1100 INTRODUCTORY LOGIC (3)
Study of the principles and evaluation of critical thinking including identification and analysis of fallacious, as well as valid reasoning. Traditional and symbolic logic will be considered and foundations will be laid for further study in each area. *This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHI2100 INTRODUCTION TO PHILOSOPHY (3)
be examined. 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 also be examined. *This course can be used for the AA degree.*
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHI2600 INTRODUCTION TO ETHICS (3)
This course is an introduction to the nature of ethics, ethical thinking, major intellectual movements in the history of ethics, and specific problems in ethics. A study of the basic concepts and principles of morals, values, and judgments that govern human actions, as well as various ethical theories, will be conducted. The relationship between ethics, society, religion, and culture will also be examined.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
*This course can be used for the AA degree.*
PHI2930 SPECIAL TOPICS: PHILOSOPHY (3)
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Topics will be identified by the PHI2930 course title published in the course schedules for each term that the course is offered. Special Topics credit hours are not automatically transferable. Transfer credit is the prerogative of the receiving institution.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PHT1000 PHYSICAL PRINCIPLES FOR THE PT ASSIST (1)
Course introduces the student to the basic physical principles that apply to commonly utilized therapeutic procedures in the field of physical therapy. Topics include but are not limited to body mechanics, ergonomics, the physiological effects of heat, cold, sound and electricity to facilitate heating. Prerequisite: PHT1103L
Corequisite: PHT1200
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT1020 THERAPEUTIC COMMUNICATION FOR THE P (2)
An overview of effective communication skills and concepts regarding successful therapeutic interactions will be presented. Students will participate in several interactive sessions to become familiar with team building, verbal and non-verbal communication requirements, effective listening concepts, and conflict management to determine how to manage clinical situations as they arise. Cultural diversity is discussed. Students are responsible for developing an in-service presentation as a means of enhancing effectiveness of communication. Prerequisite: PHT1801L
Corequisite: PHT2224
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT1103 ANATOMY FOR THE PT ASSISTANT (2)
Course introduces basic human anatomy with an emphasis on the structure and function of the skeletal and muscular systems. Actions, origins, insertions and innervations of muscles are discussed. Surface anatomy is presented with an introduction to basic palpation. Corequisite: PHT1103L PHT1200
Pre or Corequisite: BSC2086 BSC2086L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT1103L ANATOMY FOR PHYSICAL THERAPIST ASSIST (1)
Laboratory sessions for Anatomy for PTA (PHT1103) are designed to provide the students with an opportunity to identify, with accuracy, a variety of bones, bony landmarks, muscles, ligaments and other soft tissue structures using graphics and various anatomical specimens/models. Basic palpation skills are developed. Corequisite: PHT1103 PHT1200L
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

PHT1200 INTRODUCTION TO PHYSICAL THERAPY (3)
Course introduces the student to the historical background, philosophy and goals of physical therapy as a profession. It incorporates discussion on legal and ethical issues, educational requirements, supervisory relationships and current developments related to physical therapy. Health care delivery systems, the medical record and issues of reimbursement are discussed. Presents the basic theory of preparing the patient and the treatment area, positioning and transferring techniques, gait training, and wheelchair prescription. Professional behaviors are introduced. Corequisite: PHT1200L PHT1300
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT1200L INTRODUCTION TO PHYSICAL THERAPY LA (1)
Laboratory sessions for Introduction to Physical Therapy (PHT1200) are designed to allow the students an opportunity to familiarize themselves with the basic fundamentals of patient care. Emphasis is on body mechanic analysis, positioning procedures, transfers, gait training, and basic patient preparation skills. 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. Skill checks as well as competency evaluations are completed.
Professional behaviors, at the novice level, are assessed. Corequisite: PHT1103L PHT1200
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=50.00

PHT1211 DISABILITIES AND THERAPEUTIC PROCED (2)
Course introduces the student to the theory and practical application of physical therapy modalities. The physiological effects of and the indications/contraindications of patient care interventions such as heat, cold, radiant therapy, electrotherapy, traction, intermittent compression and massage are presented. Principles of effective documentation and discharge planning are discussed. Problem-solving skills are detailed. Prerequisite: BSC2086 BSC2086L PHT1103 PHT1200
Corequisite: PHT1010 PHT1211L PHT2224
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT1211L DISABILITIES AND THERAPEUTIC PROCED (2)
Laboratory sessions for Disabilities & Therapeutic procedures (PHT1211) are designed to develop student skills in the actual performance of the patient care interventions presented. Skills in massage are developed. Practical application of each intervention is emphasized with patient simulations and case studies enhancing the ability to understand a plan of care for a patient. Professional behaviors, at the intermediate level, are assessed. Data collection relative to the course content as well as patient and caregiver education are emphasized. Skill checks as well as competency evaluations are completed. Students are expected to demonstrate competency in carrying out an appropriate therapeutic modality plan of care, including effective documentation. Corequisite: PHT1211 PHT2224L
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=50.00

PHT1300 SURVEY OF PATHOLOGICAL DEFICITS (3)
Course introduces the student to general pathological conditions with emphasis on those commonly seen in the field of physical therapy. Basic system anatomy is reviewed with an emphasis on the pathophysiology of disease. Descriptions of how diseases are classified and the natural course/prognosis of these diseases are presented. Implications of disease processes, etiology, signs and symptoms, diagnostic testing, contraindications/precautions and treatment are discussed for each pathology presented in the course. When relevant, specific physical therapy plans, such as chest PT, are discussed. The effects of aging upon disease and in general are considered. Pre or Corequisite: PHT1200 PHT1310
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT1310 SURVEY OF MUSCULOSKELETAL DEFICITS (2)
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 as well as contraindications, precautions and patient/caregiver education related to physical therapy are discussed through case study analysis. The effects of aging upon disease and in general are considered. Pre or Corequisite: BSC2086 BSC2086L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT1350 BASIC PHARMACOLOGY FOR PT ASSISTANT (1)
Course introduces concepts of basic pharmacology and presents pharmacological agents dispensed for conditions commonly seen in physical therapy. Drug responses and interactions as they relate to patient response are discussed. Prerequisite: PHT1010 PHT2224
Pre or Corequisite: PHT2162
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT1801L CLINICAL PRACTICE I (2)
Course involves student assignment to a local clinical facility. Includes scheduled class meetings to discuss clinical performance objectives, the self-appraisal process, and overall requirements for this novice-level practicum. Discussions also include professionalism, attitudes, patient rapport, sexual harassment, etc. A journal report of clinical experiences and an article review are required. Weekly online discussion forums facilitate critical thinking, peer review, and managing clinical situations at the novice-level. Students attend a
personal conference with the academic coordinator of clinical education to discuss progress and to identify areas of strength/weakness with appropriate target dates methods of amelioration, if needed. Students receive a satisfactory/fail grade. Prerequisite: PHT1200L PHT1300

Corequisite: PHT1211 PHT2224
Lec Hrs=0 Lab Hrs=0 Oth Hrs=120 Fees=61. 18

PHT2120 APPLIED KINESIOLOGY (3)
This course is designed as part of a continuum in the application of anatomy to facilitate student analysis of functional movements with specific focus on the relationship between joint structure and function. Principles of biomechanics as it relates to human movement will be reviewed. Normal and pathological gait patterns are presented as well as normal and pathological movement patterns of the head, spine, pelvis, UE, and LE. Special tests which help identify specific deficits will be discussed. Case studies of various functional impairments with an emphasis on functional task analysis as well as therapeutic interventional approaches which help restore function are presented. Orthotic interventions for the spine and extremities are applied with an an emphasis on correcting pathological biomechanics. Prerequisite: PHT1211L PHT2224L

Corequisite: PHT1350 PHT2120
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0. 00

PHT2162 SURVEY OF NEUROLOGICAL DEFICITS (4)
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. Prerequisite: PHT1211

Corequisite: PHT2120 PHT2810L
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

PHT2224 DISABILITIES & THERAPEUTIC PROCEDUR (4)
Course introduces concepts of therapeutic exercise with regards to its principles, and objectives. The theory of and application of specific exercise regimes are presented. Principles of ROM and stretching techniques are presented. A basic introduction to goniometry and manual muscle testing procedures is presented as it pertains to the development of therapeutic exercise interventions. Prerequisite: PHT1103 PHT1310

Corequisite: PHT1211 PHT1801L PHT2224L
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

PHT2224L DISABILITIES AND THERAPEUTIC PROCED (2)
Laboratory sessions for Disabilities and Therapeutic Procedures II (PHT2224) are designed to provide the student with observation and actual application of therapeutic exercise in the laboratory setting. Case studies of various
medical conditions with emphasis on therapeutic exercise interventions are completed. ROM 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. Professional behaviors, at the intermediate level, are assessed. Skill checks as well as competency evaluations are completed. Students are expected to demonstrate competency in developing and carrying out an appropriate therapeutic exercise program including effective documentation. Corequisite: PHT1020 PHT1211L PHT2224
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=22.00

PHT2704 REHABILITATION PROCEDURES (3)
Advanced course designed to develop skill in and understanding of the underlying principles of advanced physical therapy plans of care including motor learning principles. Techniques presented include advanced therapeutic exercise programs (stroke, spinal cord injured, etc.) proprioceptive neuromuscular facilitation (PNF), Bobath and Brunnstrom. Amputations and principles of prosthetics are detailed with fitting and check-out procedures reviewed. Prerequisite: PHT1350
PHT2162

Corequisite: PHT2704L PHT2931
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PHT2704L REHABILITATIVE PROCEDURES LAB (1)
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. Stump wrapping and therapeutic management of prosthetic patients are practiced. Case studies of various medical conditions with emphasis on advanced therapeutic exercise approaches as well as application of prosthetic principles are completed. Data collection relative to the course content as well as patient and caregiver education are emphasized. Skill checks are completed. Students are expected to demonstrate competency in developing and carrying out appropriate interventions for a patient with neurological deficits. Professional behaviors, at the entry level, are assessed. Prerequisite: PHT2120L PHT2162
Corequisite: PHT2704 PHT2931
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00

PHT2810L CLINICAL PRACTICE II (5)
Course involves student assignment to local clinical facility. Includes scheduled class meetings to review clinical performance objectives, the self-appraisal process, and overall requirements for this intermediate level practicum. Class discussions are held to share and discuss experiences, patient care problems, learning styles, cooperative group participation, acceptance and implementation of constructive criticism, etc. A clinical journal and an in-service are required. Weekly online discussion forums facilitate critical thinking, peer review, and managing clinical situations at the intermediate level. Students attend a personal conference with the academic coordinator of clinical education to discuss progress and to identify areas of strength/weakness with appropriate target dates and methods of amelioration, if needed. Students receive a satisfactory/fail grade. Prerequisite: PHT1020 PHT1801L PHT2224L

Corequisite: PHT2120 PHT2162
Lec Hrs=0 Lab Hrs=300 Oth Hrs=0 Fees=69.18

PHT2820L CLINICAL PRACTICE III (5)
Course involves full time student assignment to a local clinical facility. Includes scheduled class meetings to discuss clinical performance objectives, the self-appraisal process, and overall requirements for this entry-level practicum. A clinical journal, a case study report and a research project are required. Class discussions are held to share and discuss experiences, patient care problems, readiness for the workplace, leadership responsibilities, professional growth, etc. Weekly online discussion forums facilitate critical thinking, peer review, and managing clinical situations at entry level. Students attend a personal conference with the academic coordinator of clinical education to discuss progress and to identify area of strength/weaknesses with appropriate target
dates and methods of amelioration where necessary. Students receive a satisfactory/fail grade. Corequisite: PHT2704 PHT2704L PHT2931
Lec Hrs=0 Lab Hrs=0 Oth Hrs=300 Fees=65. 18

PHT2931 TRANSITION SEMINAR (2)
A discussion and presentation seminar course on 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 challenges of a disability 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. Prerequisite: PHT2120 PHT2162 PHT2810L Corequisite: PHT2704 Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=87. 00

PHY1001 APPLIED PHYSICS (3)
PHY 1001 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. Prerequisite: MAT1033 Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

PHY1001L APPLIED PHYSICS LAB (1)
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. Placement by Testing Department or Pre or Corequisite: PHY1001 This course can be used for the AA degree. Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=84. 00

PHY2048 GENERAL PHYSICS WITH CALCULUS I (4)
PHY 2048 is part one of a comprehensive course in physics outlining mechanics, heat, wave motion and sound using analysis in calculus. Pre or Corequisite: MAC2312 PHY2048L This course can be used for the AA degree. Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

PHY2048L GENERAL PHYSICS WITH CALCULUS I LAB (1)
PHY 2048L 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 PHY 2048. Students will create experiment reports using analysis in calculus. Pre or Corequisite: PHY2048. This course can be used for the AA degree.

PHY2049 GENERAL PHYSICS WITH CALCULUS II (4)
PHY 2049 is part two of a comprehensive physics course outlining electricity, magnetism and optics using analysis in calculus. Prerequisite: PHY2048
This course can be used for the AA degree. Pre or Corequisite: MAC2313 PHY2049L Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

PHY2049L GENERAL PHYSICS WITH CALCULUS II LA (1)
A continuation of laboratory experiences chosen to coincide with the topics of electricity, magnetism, optics. One 2-hour period per week. Special fee charged. Placement by Testing Department or Prerequisite: PHY2048 PHY2048L
This course can be used for the AA degree. Pre or Corequisite: PHY2049 Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=24. 00

PHY2053 GENERAL PHYSICS I (3)
PHY2053 is the first course in a two semester sequence outlining mechanics, properties of matter, heat and sound. Algebra, trigonometry, geometry and vector methods will be used in the quantitative description of these topics. Prerequisite: MAC1114
This course can be used for the AA degree. Pre or Corequisite: PHY2053L Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
PHY2053L GENERAL PHYSICS I LAB (1)
PHY 2053L is a laboratory which allows students to able to collect and analyze data in a variety of experiments covering topics covered in its companion course PHY 2053. Students will create experiment reports using analysis in algebra. Pre or Corequisite: PHY2053
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=18. 00
*This course can be used for the AA degree.

PHY2054 GENERAL PHYSICS II (3)
PHY2054 is the second course in a two semester sequence, PHY2053 and PHY2054. This sequence includes two laboratory classes: PHY2053L to be taken concurrently with PHY2053, and PHY2054L to be taken concurrently with PHY2054. The topics covered in PHY2054 include: electricity, magnetism and optics. Algebra, trigonometry, geometry and vector methods will be used in the quantitative description of these topics. Prerequisite: PHY2053 PHY2053L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
*This course can be used for the AA degree.

PHY2054L GENERAL PHYSICS II LAB (1)
Laboratory experiences designed to accompany the topics under study in PHY2054. One two hour period per week. Special fee charged. Placement by Testing Department or Prerequisite: PHY2053 PHY2053L
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=30. 00
*This course can be used for the AA degree.

PHY2420 ELEMENTARY WAVE THEORY (3)
A survey of the basic topics in the properties of physical and electromagnetic waves, including the study of intensity and motion waves. Placement by Testing Department or Prerequisite: MAT1033
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
*This course can be used for the AA degree.

PHY2464 ACoustics (3)
A survey of basic topics in the physical properties of sound and music, including an in-depth study of wave motion, pitch, timbre intensity, and the nature of stringed, wind, percussion, and vocal instruments. Three hours weekly. Prerequisite: MAT1033 with a grade of "C" or higher. Prerequisite or corequisite: MUT1111 or consent of instructor. Placement by Testing Department or Prerequisite: MAT1033
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
*This course can be used for the AA degree.

PLA1003 INTRODUCTION TO LEGAL ASSISTING (3)
This course provides an overview of the training and duties of the legal assistant/paralegal. Also included is a discussion of legal terminology, research techniques, and pertinent litigation documents. Program Manager's approval or Pre or Corequisite: ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

PLA1104 LAW LIBRARY/RESEARCH (3)
This course provides information on how to research using both traditional and computer-assisted methodologies. An in-depth examination of the law library and legal research techniques are emphasized. Program Manager's approval or Pre or Corequisite: ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=48. 00

PLA1201 CIVIL LITIGATION (3)
This course covers the basic concepts of Civil Litigation. Discussions involve the liability of the individual in relation to the specific acts committed. Program Manager's approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

PLA1303 CRIMINAL LITIGATION (3)
This course provides students with a survey of the criminal justice system. Substantive and procedural aspects of criminal law are studied. Course content includes the nature of different crimes, the potential charges, and penalties involved; also covered are pre-trial procedures, discovery, plea-bargaining process, and the problems involved in the conduct of trial proceedings. Program Manager's approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

PLA1435 CORPORATIONS (3)
This course provides an in-depth study of Corporate Law. Topics covered include types of corporations, articles of incorporation, bylaws, shareholders’ agreements, voting rights,
management structure, directors' powers, and voluntary/involuntary dissolutions. Non-profit corporations and professional associations are also discussed. Program Manager's approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PLA1600 PROBATE PRACTICE (3)
This course prepares legal assistants to work effectively under the supervision of a lawyer in the probate and administration of an estate. The Florida Probate Code, trusts and taxes are studied. Program Manager's approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PLA1610 PROCEDURES FOR REAL ESTATE TITLE CL (3)
This course surveys the basic concepts of Real Property Law. The students study how to handle a real estate transaction from the drafting of a contract to its closing. The nature of property, the consequences of its possession, and the mechanics of the title examination are also studied. Program Manager's approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PLA1800 DOMESTIC RELATIONS (3)
This course surveys domestic relations, and includes topics such as marriage, dissolution of marriage, separation agreements, custody, legitimacy, adoption, name changes, support, court procedures, and property disposition. Program Manager's approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PLA1841 IMMIGRATION LAW (3)
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 all documents and forms associated with immigration law, the Immigration and Nationality Act and the administrative system covering the practice of immigration law. Program Manager's approval or Pre or Corequisite: ENC1101
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PLA2114 LEGAL WRITING AND DRAFTING (3)
This course concentrates on developing skills in the grammar, language, and format of legal documents. Emphasis is placed on drafting interoffice memoranda. Other documents drafted include legal correspondence, briefs, persuasive documents, and contracts. Program Manager's approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PLA2466 DEBTOR/CREDITOR RELATIONS (3)
This course provides an in-depth study of Debtor/Creditor law. Topics covered include collection of debts through court processes, post-judgment collection practices, bankruptcy law, landlord/tenant debt law, collection of debts based upon negotiable instruments, federal consumer collection acts, and foreclosure actions. Program Manager's approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PLA2762C PARALEGAL OFFICE SYSTEMS (3)
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 also covered. Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=24 Lab Hrs=24 Oth Hrs=0 Fees=20.00

PLA2930 SELECTED TOPICS IN PARALEGAL STUDIES (3)
This course will explore a selection of topics and trends of special interest in the legal field. Program Managers approval or Prerequisite: ENC1101 PLA1003 PLA1104
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

PLA2940 LEGAL ASSISTING PRACTICUM (3)
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. Program Manager's
approval. Prerequisite: ENC1101  PLA1003  PLA1104
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00

POS2041 NATIONAL GOVERNMENT (3)
This course provides a systematic introduction to the political system of the United States of America through the study of theory, principles, policy outcomes, and responsible institutions involved in the formation and operation of American National Government. The course will be organized along four broad fronts: (1) the political founding; (2) political parties and elections; (3) political institutions (e. g., president, Congress, etc.); and (4) policy (e. g., domestic and foreign). Students must earn a minimum grade of C to meet the requirements of the Gordon Rule.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

POS2112 STATE & LOCAL GOVT (3)
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. Students must earn a minimum grade of C to meet the requirements of the Gordon Rule. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

POS2601 THE AMERICAN CONSTITUTION (3)
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PSC1121 PHYSICAL SCIENCES SURVEY (3)
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. Prerequisite: MAT0028
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PSC1121L PHYSICAL SCIENCES LABORATORY (1)
PSC 1121L 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 PSC 1121. Students will create experiment reports using analysis in algebra. Pre or Corequisite: PSC1121
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=29.00
This course can be used for the AA degree.

PSC2910 DIRECTED INDEPENDENT RESEARCH (0)
Students (individually or in a group) will conduct research projects or certain aspects of research projects under the supervision of the instructor. This course is intended to help students acquire skills in applying research principles and obtaining practice in rigorous data collection and reporting in physical sciences. Hours may vary. Permission of instructor is required.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PSY2012 GENERAL PSYCHOLOGY (3)
General Psychology reviews the scientific principles related to human behavior and mental processes. Topics include the scientific method, neuroscience, learning, memory, and thinking, emotions, motivation, and health, life span development, personality, psychological disorders, and therapies, and social psychology.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PSY2012L GENERAL PSYCHOLOGY LAB (1)
This laboratory course parallels and supplements the instruction given in General Psychology (PSY2012). Illustrated in this course are a variety of experimental and behavioral activities that demonstrate the scientific basis of psychology.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PSY2043 ADVANCED GENERAL PSYCHOLOGY (3)
The rationale, methods, and application of the scientific analysis of behavior. Emphasis is placed on the lawfulness of behavior, how behavioral laws are found and used in the modification of behavior. Prerequisite: PSY2012
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PSY2905 INDEPENDENT STUDY IN PSYCHOLOGY (3)
Directed study course in the Behavioral Sciences. The course will be available to both majors and non-majors who wish to investigate a particular problem. The student will make application for the course to the Head of the Behavioral Sciences Department via an Instructor.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

PSY2930 SPECIAL TOPICS: PSYCHOLOGY (3)
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Topics will be identified by the PSY2930 title published in the course schedules for each term that the course is offered. Special Topics credit hours are not automatically transferable. Transfer credit is the prerogative of the receiving institution.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

QMB2100 QUANTITATIVE METHODS IN BUSINESS (3)
This course applies quantitative methods to business problems with emphasis on learning to select the appropriate problem solving method, applying the chosen method, and interpreting the solution. The use of quantitative methods in managerial decision making is a continuous focus of this course. Management problems are used and written managerial recommendations are required. Prerequisite: MAT1033. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT1001 INTRODUCTION TO RADIATION THERAPY (1)
This course will provide the students with an introduction to the radiation therapy program and the role and responsibilities of a student radiation therapist. This course will also define the different personnel required for a radiation therapy department to function, and define the structure and organization of hospitals. This course will also provide an introduction into cancer and cancer management with an overview of the psychological, sociological and economical aspects of cancer.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT1002 INTRODUCTION TO RADIATION THERAPY C (2)
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. Pre or Corequisite: RAT1002L RAT1804
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT1002L INTRODUCTION TO RADIATION THERAPY C (1)
A course designed to provide knowledge and hands-on instruction in the application of radiation therapy procedures with a detailed study of instrumentation. This 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. Pre or Corequisite: RAT1002 RAT1804
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=27.00

RAT1111 RADIOGRAPHIC IMAGING & MODALITIES (2)
A study of radiographic image formation & modalities to include intensifying screens, film & processing, factors that affect image density & contrast, image formation (distortion & detail), grids, digital imaging, fluoroscopy, mammography, computed tomography (CT), magnetic resonance imaging (MRI), nuclear medicine, & sonography. Prerequisite: RAT1001 RAT1614
Pre or Corequisite: RAT1002C RAT1111L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00
RAT1111L  RADIOGRAPHIC PROCESS LAB  (1)
Practical application of radiographic imaging through exposing phantom body parts to x-radiation and image processing. Prerequisite: RAT1001 RAT1111

Pre or Corequisite: RAT1002C RAT1111
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=40.00

RAT1123  PATIENT CARE AND ETHICS  (2)
This course is designed to give an incoming student an overview of patient care and ethics. Topics that will be covered include communication, patient safety, patient transfers, immobilization of patient and body parts, infection control, vital signs, caring for patient who have special needs, pharmacology, drug administration, case history, universal precautions, isolation techniques and medical legal issues in radiation therapy.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT1515  RADIATION PHARMACOLOGY  (1)
This course is designed to discuss the pharmacology concepts as it pertains to imaging practices of the radiation therapist. This course will introduce to the students essential practices and guidelines of pharmaceutical administration essential for imaging and patient diagnosis. It will also discuss medical oncology drugs and how they are metabolized by the systems. Pre or Corequisite: RAT1001 RAT1123
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT1614  INTRO RADIATION THERAPY PHYSICS  (3)
An introductory study of radiation therapy physics to include mathematical principles & measurement, atomic structure, electromagnetic radiation, magnetism, electrostatics, electrodynamics, electromagnetism, radiographic circuits, the x-ray tube, x-ray production & interactions. Admission to program required.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2021  PRINCIPLES OF RADIATION THERAPY I  (2)
Content is designed to provide an overview of cancer and the specialty of radiation therapy. The historic and current aspects of cancer treatment will be covered. The roles and responsibilities of the radiation therapist will be discussed. In addition, treatment prescription, techniques and delivery will be covered. Pre or Corequisite: RAT2023 RAT2617 RAT2814
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2023  RADIATION ONCOLOGY 1  (3)
A study of the fundamentals of clinical radiation oncology stressing the following: etiology, epidemiology, histopathology, symptoms, diagnosis, staging, prognosis, treatment set up and guidelines, and the therapeutic aim of malignant conditions. Program admission required. Pre or Corequisite: RAT2021 RAT2617 RAT2814
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2040  RADIATION ONCOLOGY HEALTH CARE LAW  (1)
The course is a description the major legal structure and function of the United States health care system, as well as the principles and policies of that health care system. This course also provides the legal principles and rationale used for decisions made upon the health care industry and how it pertains to radiation oncology. Prerequisite: RAT1001 RAT1804

Pre or Corequisite: RAT2021 RAT2617 RAT2814
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2041  RADIATION ONCOLOGY ETHICS  (1)
This course is designed to discuss ethical thinking in regards to health care. This course will introduce to the student essential vocabulary and thought process that will enable them to participate, evaluate, and understand ethical decision making. Prerequisite: RAT2021

Pre or Corequisite: RAT2022 RAT2248 RAT2618 RAT2824
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2241  RADIOBIOLOGY  (2)
A study of the sequence of events following the absorption of energy from ionizing radiation.
Factors influencing radiation effects, tissue sensitivity, tolerance, and clinical applications are considered. Prerequisite: RAT2021

Corequisite: RAT2022
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2243 RADIATION ONCOLOGY SECTIONAL ANATOMY (4)
This course is designed to present sectional anatomy and its importance to radiation therapist in the Radiation Therapy Field. This course will include 3-D imaging identification of anatomical structures in various imaging methods and planes. Location of internal organs and critical structures by topographical anatomy will also be included. The pathophysiology of normal tissues as well as malignant tissues will also be discussed and visualized in 3-D Imaging. An emphasis on etiological considerations, neoplasia, and associated diseases in the radiation therapy patient will also be presented. Prerequisite: RAT2021 RAT2240

Corequisite: RAT2022 RAT2241
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2617 ADVANCED RADIATION THERAPY PHYSICS (3)
The fundamentals of x-ray, gamma, and corpuscular radiation as applied to radiation therapy. Teletherapy units and nuclear reactors are also discussed. Prerequisite: RAT2021 RAT2023 RAT2814
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2618 ADVANCED RADIATION PHYSICS II (3)
Advanced physics of ionizing radiation including measurements, dosages, absorption, isodose curves, filters, radioactive materials treatment planning, properties of radionuclides, radiation safety and health physics. Prerequisite: RAT2617

Corequisite: RAT2241
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2619 DOSIMETRY AND COMPUTER TREATMENT PL (2)
The study of radiation dose measurement and instrumentation usage. The need for accuracy is stressed. Prerequisite: RAT2022 RAT2241 RAT2618 RAT2657 RAT2824
Corequisite: RAT2619L

Pre or Corequisite: RAT2834
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2657 QUALITY ASSURANCE AND PHARMACOLOGY (3)
Will present an in-depth study of the principles and concepts of quality assurance and pharmacology to include the history, theory, biological effects and their relationship to oncology. Prerequisite: RAT2021

Corequisite: RAT2022
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RAT2814 CLINIC EDUCATION II (3)
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. Pre or Corequisite: RAT2021 RAT2023 RAT2617
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=71.18

RAT2824 CLINIC EDUCATION III (3)
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 assurance testing. Prerequisite: RAT2021 RAT2023 RAT2617

Corequisite: RAT2241 RAT2618
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=71.18

RAT2834 CLINIC EDUCATION IV (3)
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. Prerequisite: RAT2241 RAT2618

Pre or Corequisite: RAT2619 RAT2619L.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=78. 18

RAT2905 INDEPENDENT STUDY IN RADIATION THER (1)
A directed study course in Radiation Therapy. The course is available to only majors who wish to investigate a particular clinical education situation. The student will make an application for the course to the head of the Medical Imaging Department via an instructor with whom he/she wants to work with. Pre or Corequisite: RAT2834
Lec Hrs=0 Lab Hrs=0 Oth Hrs=128 Fees=61. 18

REA0007C COLLEGE PREPARATORY READING I (4)
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.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=20. 00

REA0017C COLLEGE PREPARATORY READING II (4)
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 EAP0420C and have taken the reading portion of the PERT assessment to place into REA0017C. Special fee charged. Prerequisite: Completion of REA0007C with a grade of "C" or higher or placement by assessment test. Prerequisite: REA0007C.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=20. 00

REA1105 COLLEGE READING STRATEGIES (3)
Teaches efficient reading abilities, comprehension, vocabulary, speed, study techniques, and reading skills necessary to conduct investigative research. REA1105 includes all CLAST skills.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

RED3342 FOUND OF RESEARCH PRAC. IN READ ED (3)
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. 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. Pre or Corequisite: EDF1005 EDF2085 EME2040 TSL3080
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39. 75

RED3352 READING IN THE CONTENT AREA (3)
This course is designed to prepare pre-service teachers of subject matter content to acquire the knowledge, skills, and techniques necessary to guide middle and secondary level students to be successful learners by addressing issues in reading instruction as an integral part of comprehending content. The course will provide classroom instructional strategies for teaching reading across the curriculum with emphasis on content areas such as science, mathematics, and social sciences. Emphasis will be given to the importance of language and cognition as well as scientifically based reading research as the basis of comprehensive instruction. Prerequisite: EDF3280 RED3342
Pre or Corequisite: EDG4410
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39. 75

RED4519 LIT ASSESSMENT AND DIFFERENTIATED I (3)
This course provides an understanding of the role of assessments in guiding instruction and decision making for reading progress of striving readers. It also provides extensive knowledge of differentiated instruction with appropriate scientifically based strategies and materials for students from differing backgrounds and diverse learners. Prerequisite: EDF3280 RED3342 RED3352

Pre or Corequisite: EEX4843 TSL4081
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

REE1040 FLORIDA REAL ESTATE COMMISSION I (4)
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.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

REL1210 OLD TESTAMENT HISTORY (3)
Reading the English Bible in various documents, and examining selected source material, with emphasis on its cultural importance today. Prerequisite: College-level reading skills. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

REL1240 NEW TESTAMENT HISTORY (3)
A study of the social, historical, cultural, and religious environment of the New Testament as well as of the dynamics of the beginnings and spread of the Christian Faith during the First Century A. D. and into the Second Century A. D. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

REL2000 INTRODUCTION TO THE STUDY OF RELIGION (3)
An introduction to the study of religion as an academic discipline. The focus of the course is religion, not religions; an attempt is made to acquaint the student with the problems and issues ever present in the understanding of religious phenomena. Upon successful completion of this course, the students should be able to recognize, describe, and appreciate the complex phenomena of religion. A student must earn a grade of "C" or higher to meet the requirements of the Gordon rule.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

REL2300 WORLD RELIGIONS (3)
This course is a descriptive examination of the world's most popular religions. College-level reading skills are recommended. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

REL2930 SPECIAL TOPICS: RELIGION (3)
Course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Topics will be identified by the REL2930 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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

RET1026 RESPIRATORY THERAPY EQUIPMENT (3)
This course reviews all of the equipment normally used for respiratory therapy with the exception of mechanical ventilation. Especially emphasized are methods used in manufacturing, storing and administering oxygen; humidity and aerosol therapy, airway management and airway clearance techniques. Prerequisite: BSC2085 CHM1032 MAT1033
Pre or Corequisite: RET1026L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RET1026L RESPIRATORY THERAPY EQUIPMENT LAB (1)
This course allows the student to work with and master the manipulative skills required to utilize respiratory therapy equipment. Emphasis is on oxygen, humidity and aerosol therapy, and airway management. Prerequisite: BSC2085 CHM1032 MAT1033
RET1264 MECHANICAL VENTILATION (3)
This course describes the concepts of mechanical ventilation, current modes of ventilation, tailoring of the ventilator settings to meet patient needs, and patient assessment on mechanical ventilation. The student will learn the concepts of noninvasive ventilation and IPPB. The principles and operation of commonly used ventilators are emphasized. Prerequisite: RET1026 RET1026L

Pre or Corequisite: RET1026
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=39.00

RET1264L MECHANICAL VENTILATION LAB (1)
This course allows the student to work with all facets of mechanical ventilation to gain hands on experience prior to entering their adult critical care rotation. Prerequisite: RET1026 RET1026L

Pre or Corequisite: RET1264 RET1484 RET1832L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RET1484 CARDIO PULMONARY PATHOPHYSIOLOGY (3)
This course is designed to introduce the students to the basic concepts of cardiopulmonary disease. Included are the mechanism of altered lung structure, airway caliber, neurogenic control and pulmonary vascular function. Prerequisite: RET1026 RET1026L RET1485

Pre or Corequisite: CVT1200 RET1264 RET1484 RET1832L
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=23.00

RET1485 RESPIRATORY PHYSIOLOGY (3)
This course provides an in-depth study of the anatomy and physiology of the cardiopulmonary system. Included is a review of the physiology of respiration, ventilatory mechanics, neurogenic control, internal and external respiration and gas exchange.
RET2286C MANAGEMENT OF THE INTENSIVE CARE PA (2)
This course provides an in depth discussion of several disease processes of the lung as well as other issues concerning the respiratory intensive care patient. This course fosters the physician to student relationship by providing physician lectures and clinical rounds with physicians. Prerequisite: RET2414 RET2414L RET2714 RET2834L RET2934 Corequisite: RET2601 RET2835L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=39.00

RET2414 RESPIRATORY THERAPY PULMONARY FUNCT (1)
This course reviews techniques used for pulmonary function testing, blood gas analysis and the basic principles of cardiopulmonary stress testing. Techniques used in the diagnosis of cardiopulmonary disease are covered. Prerequisite: RET1485 RET1833L RET2418

Corequisite: RET2414L RET2714 RET2834L
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RET2414L PULMONARY FUNCTION LAB (1)
This course provides the opportunity to practice the techniques used for spirometric determination of lung volumes and flow rates and the basic principles of cardiopulmonary stress testing. Prerequisite: RET1485

Pre or Corequisite: RET2414
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=27.00

RET2418 CARDIOPULMONARY DIAGNOSTICS AND TEC (2)
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. Prerequisite: RET2414 RET2414L RET2714 RET2834L RET2934 Corequisite: RET2286C RET2835L
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RET2714 PEDIATRIC AND NEONATAL RESPIRATORY (3)
This course emphasizes neonatal and pediatric diseases, their etiology and treatment. It encompasses the newest equipment and latest techniques used in monitoring and maintaining the respiratory compromised infant and pediatric patient. Prerequisite: RET1833L RET2418

Pre or Corequisite: RET2414 RET2834L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RET2834L RESPIRATORY THERAPY CLINIC III (3)
This clinical course is designed to introduce the student to all aspects of respiratory therapy critical care. The students will work primarily with patients requiring continuous ventilatory support. Special fee is charged. Prerequisite: RET1833L RET2418

Pre or Corequisite: RET2414 RET2714
Lec Hrs=0 Lab Hrs=0 Oth Hrs=256 Fees=61.18

RET2835L RESPIRATORY THERAPY CLINIC IV (3)
This is a continuation of the activities in Clinic III. The student's responsibility will increase as his 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. Prerequisite: RET2414 RET2834L

Pre or Corequisite: RET2286C RET2601
RET2934 SELECTED TOPICS IN RESPIRATORY CARE (1)
This course will present information on recent changes in technology and therapeutic modalities used in Respiratory Care. The student will participate in literature review activities to enable them to remain knowledgeable of ongoing changes in the profession after they become Respiratory Care practitioners. Prerequisite: RET1833L RET2414 RET2414L RET2418 Corequisite: RET2714 RET2834L
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RTE1000 INTRODUCTION TO RADIOLOGIC TECHNOLO (3)
The organization and operation of a radiology department; radiologic topics include: x-ray equipment operation, historical aspects of radiography, department organizational structure, safety, radiation protection, imaging media and receptors, image processing techniques, basic exposure factors, and accreditation and professional development. Pre or Corequisite: RTE1111 RTE1503 RTE1503L RTE1804
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RTE1111 PATIENT CARE, LAW, & ETHICS (2)
An introduction to the principles and practices of patient care during radiographic examinations. Topics include medical ethics, legal issues, patient assessment & communication, patient care & safety, infection control, surgical asepsis, vital signs & oxygen administration, electrocardiography, medical emergencies, trauma & mobile considerations, the care of pediatric & geriatric patients, patient care during urologic & GI exams, & care of patients needing alternative treatments. Pre or Corequisite: RTE1000 RTE1503 RTE1804
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RTE1418 IMAGING I (2)
A study of the production and properties of X-radiation, primary exposure factors as they relate to the formulation of radiographic technique, the properties and characteristics of imaging media and the primary factors of radiographic quality. Prerequisite: RTE1000 RTE1111 RTE1503 RTE1503L RTE1804
Pre or Corequisite: RTE1418L RTE1513 RTE1513L RTE1613 RTE1814L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RTE1418L IMAGING I LAB (1)
Practical application of theory taught in RTE1418. Students perform laboratory experiments to demonstrate concepts taught in lecture. Prerequisite: RTE1000 RTE1111 RTE1503 RTE1503L RTE1804
Pre or Corequisite: RTE1418 RTE1513 RTE1513L RTE1613 RTE1814L
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=21.00

RTE1503 RADIOGRAPHIC PROCEDURES I (3)
A study of radiographic procedures of the chest, abdomen, gastrointestinal tract, and biliary and urinary systems. Students will study the anatomy, the radiographic positions/projections, along with the trauma, mobile and pediatric considerations relating to each area covered. Pre or Corequisite: RTE1000 RTE1111 RTE1503L RTE1804
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RTE1503L RADIOGRAPHIC PROCEDURES I LAB (1)
Practical application of Radiographic Procedures I class, to include radiography of the chest, abdomen, biliary system and gastrointestinal tract, urinary system, and related trauma and mobile examinations of adults and pediatric patients. Pre or Corequisite: RTE1000 RTE1111 RTE1503
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=4.00

RTE1513 RADIOGRAPHIC PROCEDURES II (3)
A study of radiographic procedures of the upper limb, humerus & shoulder girdle, lower limb, femur & pelvic girdle, bony thorax, and related trauma, mobile, and pediatric examinations. Students will study the radiographic positions/projections for each body part and its associated anatomy. Prerequisite: RTE1000 RTE1111 RTE1503
Pre or Corequisite: RTE1418 RTE1513L RTE1613
RTE1513L RADIOGRAPHIC PROCEDURES II LAB (1)
Practical application of radiographic procedures & positioning to include the upper limb, humerus & shoulder girdle, lower limb, femur & pelvic girdle, bony thorax, & related trauma & mobile examinations. Prerequisite: RTE1000 RTE1111 RTE1503 RTE1503L RTE1804
Pre or Corequisite: RTE1418 RTE1418L RTE1513 RTE1613
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=4.00

RTE1523 RADIOGRAPHIC PROCEDURES III (2)
A study of radiographic procedures of the cervical spine, thoracic spine, lumbar spine, sacrum & coccyx, skull & cranial bones, facial bones & sinuses, & related trauma & mobile examinations. Students will study the radiographic positions/projections for each body part and its associated anatomy. Prerequisite: RTE1418 RTE1418L RTE1513 RTE1513L RTE1613 RTE1814 Pre or Corequisite: RTE1523L RTE1824
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=5.00

RTE1523L RADIOGRAPHIC PROCEDURES III LAB (1)
Practical application of radiographic procedures & positioning to include the cervical spine, thoracic spine, lumbar spine, sacrum & coccyx, skull & cranial bones, facial bones & sinuses, & related trauma & mobile examinations. Prerequisite: RTE1418 RTE1418L RTE1513 RTE1513L RTE1613 RTE1814 Pre or Corequisite: RTE1523 RTE1824
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=5.00

RTE1613 RADIOGRAPHIC PHYSICS (2)
Introduction to the fundamentals of physics involved in the operation of radiographic equipment to include: units of measurement, matter, energy, mechanics, magnetism, electrostatics, and electrodynamics. Prerequisite: RTE1000 RTE1111 RTE1503 RTE1503L RTE1804
Pre or Corequisite: RTE1418 RTE1418L RTE1513 RTE1513L RTE1814 Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RTE1804 CLINICAL EDUCATION I (2)
Provides the student with clinical experience for practical application of concepts & skills taught in lecture & laboratory. Clinical rotations include an orientation to the hospital & imaging department, patient transportation & clerical functions, image processing, the main department, portables, the emergency room, & other ancillary imaging areas. Students will perform radiographic exams of the chest, abdomen, biliary tract & upper gastrointestinal system, lower gastrointestinal system, & urinary system. Prerequisite: RTE1000 RTE1111 RTE1503 RTE1503L
Lec Hrs=0 Lab Hrs=0 Oth Hrs=256 Fees=72.18

RTE1814 CLINICAL EDUCATION II (2)
Provides the student with continuing clinical experience for practical application of concepts & skills taught in lecture & laboratory. Clinical rotations include the main department, portables, the emergency room, & other ancillary imaging areas. Students will perform radiographic exams of the upper limb, humerus & shoulder girdle, lower limb, femur & pelvic girdle, bony thorax, & procedures previously learned. Prerequisite: RTE1000 RTE1111 RTE1503 RTE1503L RTE1804
Pre or Corequisite: RTE1418 RTE1418L RTE1513 RTE1513L RTE1613 RTE1814 Lec Hrs=0 Lab Hrs=0 Oth Hrs=256 Fees=72.18

RTE1824 CLINICAL EDUCATION III (2)
Provides the student with continuing clinical experience for practical application of concepts & skills taught in lecture & laboratory. Clinical rotations include the main department, portables, the emergency room, & other ancillary imaging areas. Students will perform radiographic exams of the cervical, thoracic, & lumbar spines, sacrum & coccyx, skull & cranial bones, facial bones & sinuses, & procedures previously learned. Prerequisite: RTE1418 RTE1418L RTE1513 RTE1513L RTE1613 RTE1814 Pre or Corequisite: RTE1523 RTE1523L
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=72.18

RTE2061 RADIOGRAPHY SEMINAR (1)
A review of the topics studied during the Radiography Program to help students prepare for the American Registry of Radiologic
Technologists (ARRT) Certification Exam and to transition to the role of professional care-giver. Topics include radiation protection, equipment operation & quality control, image production & evaluation, radiographic procedures, and patient care & education. Prerequisite: RTE2130 RTE2130L RTE2623 RTE2782 RTE2844
Pre or Corequisite: RTE2854
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

RTE2130 PHARMACOLOGY & VENIPUNCTURE FOR RAD (1)
A study of pharmacology & venipuncture related to the administration of drugs & contrast media for radiographic examinations. Topics include pharmacology principles, parenteral contrast media, drug administration, & venipuncture technique. Prerequisite: RTE2385 RTE2457 RTE2457L RTE2533 RTE2834
Pre or Corequisite: RTE2130L RTE2623 RTE2782 RTE2844
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

RTE2130L PHARMACOLOGY & VENIPUNCTURE FOR RAD (1)
Practical application of the principles of pharmacology & venipuncture related to the administration of drugs & contrast media for radiographic examinations. Prerequisite: RTE2385 RTE2457 RTE2457L RTE2533 RTE2834
Pre or Corequisite: RTE2130 RTE2623 RTE2782 RTE2844
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=14. 00

RTE2385 RADIATION BIOLOGY AND PROTECTION (2)
Study of the biological effects associated with exposure to ionizing radiation and the accepted radiation protection principles and practices. Topics will include radiation sources, radiation/matter interaction modes, cellular, tissue and total body biological response patterns, radiation detection and measurement and Federal and State radiation protection guidelines relating to equipment and personnel. Prerequisite: RTE1523 RTE1523L RTE1824
Pre or Corequisite: RTE2457 RTE2457L RTE2533 RTE2834
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

RTE2457 IMAGING II (2)
A study of the factors that affect radiographic image quality, solving technique problems, automatic exposure control, & development of technique charts. Prerequisite: RTE1523 RTE1523L RTE1824
Pre or Corequisite: RTE2385 RTE2457L RTE2533 RTE2834
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

RTE2457L IMAGING II LAB (1)
Practical application of theory taught in RTE2457 class. Students perform laboratory experiments to demonstrate factors affecting radiographic quality. Prerequisite: RTE1523 RTE1523L RTE1824
Pre or Corequisite: RTE2385 RTE2457 RTE2533 RTE2834
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=25. 00

RTE2533 RADIOGRAPHIC PROCEDURES IV (2)
A study of radiographic procedures to include computed tomography (CT), surgical radiography, arthrography, hysterosalpingography, myelography, sialography, orthoroentgenography, mammography, bone densitometry, angiography & interventional examinations, magnetic resonance imaging (MRI), sonography, nuclear medicine, & radiation therapy. Students will study the radiographic positions/projections for each body part/procedure and its associated anatomy. Prerequisite: RTE1523 RTE1523L RTE1824
Pre or Corequisite: RTE2385 RTE2457 RTE2457L RTE2834
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

RTE2575 INTRODUCTION TO MAGNETIC RESONANCE (3)
A study of the clinical applications and principles of Magnetic Resonance Imaging. Basic MR physics, history, hardware, safety, and important aspects of the MR exam are among the topics covered to introduce the student to the MR Imaging Technology profession. Prerequisites: Graduation from a two year allied health program.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=12. 00
RTE2623 RADIOGRAPHIC EQUIPMENT 
& QUALITY AS (3)
A study of the physical basis of operation of radiographic equipment. Emphasis includes x-ray equipment components, x-ray tubes, image tubes, intensifiers, TV monitors and video recorders, serial imaging, generators, image subtraction techniques, digital equipment, non-film imaging equipment, accessory equipment, x-ray production and interaction processes, Quality Assurance and CT equipment. Prerequisite: RTE2385 RTE2457 RTE2457L RTE2533 RTE2834
Pre or Corequisite: RTE2130 RTE2130L RTE2782 RTE2844
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.

RTE2782 RADIOGRAPHIC PATHOLOGY
(1)
An introduction to the study of human disease and the radiographic appearances of specific diseases. Topics will include: Pathogenesis, disease classification systems, and the study of specific diseases of the respiratory, skeletal, gastrointestinal, hepatobiliary, urinary, cardiovascular & hematopoietic, nervous, endocrine and reproductive systems with radiologic imaging considerations. Prerequisite: RTE2385 RTE2457 RTE2457L RTE2533 RTE2834
Pre or Corequisite: RTE2130 RTE2130L RTE2623 RTE2844
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.

RTE2834 CLINICAL EDUCATION IV (3)
Provides the student with continuing clinical experience for practical application of concepts & skills taught in lecture & laboratory. Clinical rotations include the main department, portables, the emergency room, the operating room, computed tomography (CT), magnetic resonance imaging (MRI), sonography, nuclear medicine & PET, radiation therapy, other ancillary imaging areas, & evenings. Students will perform, assist with, and/or observe MRI scans, sonograms, nuclear medicine scans, radiation therapy, & procedures previously learned. Prerequisite: RTE2385 RTE2457 RTE2457L RTE2533 RTE2834
Pre or Corequisite: RTE2130 RTE2130L RTE2623 RTE2782
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=72.

RTE2844 CLINICAL EDUCATION V (3)
Provides the student with continuing clinical experience for practical application of concepts & skills taught in lecture & laboratory. Clinical rotations include the main department, portables, the emergency room, the operating room, computed tomography (CT), magnetic resonance imaging (MRI), sonography, nuclear medicine & PET, radiation therapy, other ancillary imaging areas, & evenings. Students will perform, assist with, and/or observe MRI scans, sonograms, nuclear medicine scans, radiation therapy, & procedures previously learned. Prerequisite: RTE2385 RTE2457 RTE2457L RTE2533 RTE2834
Pre or Corequisite: RTE2130 RTE2130L RTE2623 RTE2782
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=72.

RTE2854 CLINICAL EDUCATION VI (1)
Provides the student with terminal clinical experience for practical application of concepts & skills taught in the program. Clinical rotations include the main department, portables, the emergency room, the operating room, & other ancillary imaging areas. Students will perform all radiographic exams previously learned to include the chest & bony thorax, abdomen, upper & lower extremities, spine, cranium, contrast media studies, & surgical procedures. Prerequisite: RTE2130 RTE2130L RTE2623 RTE2782 RTE2844
Pre or Corequisite: RTE2061
Lec Hrs=0 Lab Hrs=0 Oth Hrs=144 Fees=72.

RTV2000 INTRODUCTION TO RADIO 
AND TELEVISION (3)
An introduction to the broadcast media through which the students should gain an understanding of the historical, technical, legal, and critical aspects of radio and television media. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=15.
RTV2102 Broadcast Writing (3)
Designed to give students an opportunity to learn the style of presentation for different types of media/broadcast scripts. The course will emphasize practical broadcast writing skills, radio and television copy techniques and forms of commercial copy, as well as learning the special rules and regulations governing the presentation of materials "over the air." Instructor's approval or Prerequisite: ENC1101 ENC1102 This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

RTV2241C Television Production I (3)
In this course the student will acquire understanding of the theory and practice of television program production and directing with emphasis on studio production. There is a requirement of two hours of television laboratory production per week. Completion of RTV2000 recommended prior to taking this course. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=32 Oth Hrs=0 Fees=50.00

RTV2949 Co Op Work Exp (3)
A course designed to provide training in a student field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by students and employer. Prerequisite: Co-Op department approval. Student will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval.
Lec Hrs=0 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

RUSI120 Beginning Russian I (4)
Fundamentals of speaking, understanding, reading and writing. Classroom practice and exercises supplemented by language laboratory.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00 This course can be used for the AA degree.

SCE3320 Integrative Teaching Methods in MID (3)
This inquiry-based course involves active participation and reflection of the learning process which will promote the growth and development of equitable middle school science constructs. The Pre-service educator will apply knowledge previously acquired in individual content science courses and communicate them by designing an integrated and lab-based science curriculum unit. Students will be required to spend 2 non-credit hours per week for a mandatory 20 hours as part of a field experience component. Course completers will teach integrated science concepts using the inquiry processes as the basis for teaching and learning Science in middle schools. Prerequisite: EDF3280
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

SCE3420C Physical Science for Middle School (4)
This course is a study of the fundamental concepts of physical science as part of teaching science in grades 5-9. This course focuses on three elements: content knowledge, inquiry and other teaching strategies, and use of multimedia and visualization tools in teaching and learning about physical science. This course incorporates methods and metacognitive strategies for learning and teaching, including scientific reasoning, prediction, and abstract and critical thinking, and helps educators optimize their science teaching experiences. Through the readings, videos, discussions, assignments, and other interactive experiences, learners in this course will have multiple opportunities to develop content knowledge about transfer of energy; light, sound, and waves; mechanisms of heat transfer; and solubility and density. Prerequisite: CHM1045 CHM1045L MAC1105 PHY1001 PHY1001LLec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SCE3941 Teaching Middle and Secondary Schoo (3)
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 classroom. 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. Prerequisite: SCE4330
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

SCE3943 INTERACTIVE PROJECTS THAT PROMOTE L (3)
This inquiry based course involves active participation and reflection of the learning process that will promote the growth and development of equitable middle and high school constructs. The Pre-professional educator will apply knowledge previously acquired in individual content science courses and communicate them by designing an integrated and lab-based curriculum unit. Course completers will teach integrated science concepts using inquiry processes as the basis for teaching and learning Science in middle and high schools.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SCE4330 METHODS AND STRATEGIES OF TEACHING (3)
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

SCE4945 STUDENT TEACHING IN SCIENCE (12)
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." Lec Hrs=12 Lab Hrs=0 Oth Hrs=525 Fees=39.75

SLS1001 STRATEGIES FOR SUCCESS (3)
This course is tailored for First Time in College students and provides opportunities to learn about Broward Community College and higher education, acquire and practice learning strategies, explore personal learning styles, identify career options, and develop life-long skills for responsible citizenship. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SLS1103 FOUNDATION COURSE (3)
This course is tailored for First Time in College students and provides opportunities to learn about professional behaviors that lead to academic and "knowledge work" career success such as developing self-discipline, leading self-managed teams, and creating effective teams composed of individuals with different working styles.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

SLS1261 LEADERSHIP (3)
The purpose of this course is to provide effective leadership skills for student leaders to help them develop an ethical, value grounded leadership style for future educational, organizational and community leadership roles.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

SLS1272 TEAM SELF-MANAGEMENT AND CAREER EXP (3)
This course provides an introduction to Team Self-Management (TSM) theory and practice of team self-management and its application in work organizations: explores the connections between one's purpose and intentions and one's behaviors, and develops the self-management skills to successfully attain one's goals. The course provides an introduction to career exploration and planning. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SLS1301 CAREER PLANNING WORKSHOP (2)
This course is a study of the career decision making process. The student will learn the skills
necessary for career decision making as it applies to their individual characteristics (including values, interests, abilities, goals, strengths, etc.).
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

SLS1501 COLLEGE SUCCESS SKILLS (1)
This course is designed primarily for freshman students. It serves as an introduction to Broward Community College and 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. This course can be used for the AA degree.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

SLS2271 TEAM SELF MANAGEMENT WITH SOCIAL JUSTICE (3)
This course provides students with the theory and practice of team self management. It includes leading and working on a self-managing team, and developing project management skills. This course will also help students develop awareness of social justice topics so that they may gain an in-depth understanding of a social justice issue through utilizing primary based research, and scenario planning methodologies. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

SLS2715 STUDENT LEADERSHIP DEVELOPMENT (1)
The purpose of this course is to provide effective leadership skills for student leaders to help them develop an ethical, value grounded leadership style for for their role as peer mentors and advocates.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

SON1003L FUNDAMENTALS OF SONOGRAPHY LAB I (1)
This course incorporates an introduction to ultrasound scanning techniques using ultrasound equipment to practice the principles and protocols to the performance of adequate diagnostic sonographic imaging and Doppler procedures in a supervised setting. Prerequisite: SON1100 SON1170
Corequisite: SON1121 SON1211 SON1214 SON1804
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=17. 00

SON1100 PRINCIPLES AND PROTOCOLS OF SONOGRAPHY (3)
An introduction to the basic approaches to sonographic scanning and scanning protocols for the abdomen and pelvis. Prerequisite: Program Admission. Pre or Corequisite: SON1170
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

SON1100L PRINCIPLES AND PROTOCOLS OF SONOGRAPHY (2)
An introduction to the basic approaches to sonographic scanning and scanning protocols for the abdomen and pelvis Pre or Corequisite: SON1170
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0. 00

SON1111 ABDOMINAL SONOGRAPHY I (2)
An introduction to the cross-sectional anatomy of the abdominal area and its recognition on sonographic visualization systems. Prerequisite: SON1170
Pre or Corequisite: SON1121 SON1211 SON1214 SON1804
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

SON1112 ABDOMINAL SONOGRAPHY II (2)
An in-depth presentation of sonographs of the abdominal area stressing deviations from the norm and the studies to make a diagnostically acceptable study. Prerequisite: SON1111 SON1121 SON1170
Pre or Corequisite: SON1122 SON1212 SON1215
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0. 00

SON1121 SONOGRAPHIC OB/GYN I (2)
An introduction to the cross-sectional anatomy of the female reproductive system with and without an existing pregnancy. The sonographic
recognition of the normal throughout all terms of pregnancy is presented. Prerequisite: SON1170

Pre or Corequisite: SON1111 SON1211
SON1214
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SON1122 SONOGRAPHIC OB/GYN II (2)
The detection of anomalies, pathology, deviation from normal and the planes which must be sonographically imaged for accurate diagnosis is stressed. Prerequisite: SON1111 SON1170 SON1211 SON1804
Pre or Corequisite: SON1112 SON1212 SON1215
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SON1141 SMALL PARTS SONOGRAPHY (2)
A general introduction to the areas of carotid, eye, thyroid, prostate, scrotum, breast and other superficial structures. Prerequisite: SON1112 SON1122 SON1212
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SON1170 SONOGRAPHY OF THE CIRCULATORY SYSTE (2)
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. Pre or Corequisite: SON1100L
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SON1211 MEDICAL SONOGRAPHIC PHYSICS I (3)
A study of the principles of diagnostic ultrasound, the fundamental properties of ultrasonic physics, stressing tissue interactions, and interfaces. Focusing characteristics, methods, intensity, and power considerations are introduced along with system resolution considerations. Prerequisite: SON1100 SON1170

Pre or Corequisite: SON1111 SON1211
SON1214
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SON1212 MEDICAL SONOGRAPHIC PHYSICS II (3)
A continuation of the study of the properties of diagnostic ultrasound stressing the operation of diagnostic equipment, the display systems, biological effects and quality assurance methods. Current developments in ultrasound are reviewed, discussed, and evaluated. Prerequisite: SON1111 SON1121 SON1211

Pre or Corequisite: SON1112 SON1122
SON1215
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SON1214 PRACTICAL ASPECTS OF SONOGRAPHY I (2)
A study of the principles of diagnostic ultrasound and practical aspects of scanning techniques, film critique, film identification and patient care and handling as related to sonographic examination. Stressing the operation of diagnostic ultrasound equipment and routine images obtained. Prerequisite: SON1170

Pre or Corequisite: SON1111 SON1121
SON1211
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=17.00

SON1215 PRACTICAL ASPECTS OF SONOGRAPHY II (2)
Offering more advanced principles of diagnostic ultrasound, adding knowledge of pathological processes. Further presenting the practical aspects of scanning techniques, film critique, film identification and patient care and handling as related to sonographic examination. Stressing the correlation of all patient data, including sonographic images obtained to assist in the differential diagnosis process. Prerequisite: SON1111 SON1170 SON1211

Pre or Corequisite: SON1112 SON1122
SON1212
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=17.00

SON1804 CLINIC A (2)
Clinical education requiring application of the knowledge learned. Professionalism and personal interaction are stressed along with technical abilities. As the student progresses he or she will be performing examinations with less and less supervision. Prerequisite: SON1170
Pre or Corequisite: SON1111 SON1121 SON1211  
Lec Hrs=0 Lab Hrs=0 Oth Hrs=256 Fees=102. 18

SON1814 CLINIC B (2)  
A continuation of the learning by doing process where more responsibility in the form of decision making regarding anatomical areas and resultant imaging is assumed by the student being supervised. 24 Hr. clinical per week. Term II. Prerequisite: SON1111 SON1121 SON1211 SON1804  
Pre or Corequisite: SON1112 SON1122 SON1212  
Lec Hrs=0 Lab Hrs=0 Oth Hrs=256 Fees=102. 18

SON1824 CLINIC C (3)  
This clinical course is designed to provide students the opportunity to make judgmental decisions regarding technical aspects, to interact in a professional manner with those with whom he/she comes in contact with, and to generally progress to the point where, after successful testing, he/she may be accepted as a competent sonographer for general sonographic exams. Prerequisite: SON1112 SON1122 SON1814  
Pre or Corequisite: SON1141  
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=102. 18

SON2013L FUNDAMENTALS OF SONOGRAPHY LAB II (1)  
This course incorporates ultrasound scanning techniques using ultrasound equipment to practice the principles and protocols to the performance of adequate diagnostic sonographic imaging and Doppler procedures in a supervised setting. Prerequisite: SON1003L SON1111 SON1121  
Corequisite: SON1112 SON1122  
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0. 00

SON2061 SEMINAR IN SONOGRAPHY (1)  
A discussion and presentation seminar course on interpersonal skill refinement, employment techniques, and career development. The course also provides a comprehensive curriculum review of all aspects of Sonography and presents details on applying for licensure as students prepare for the transition to the work place. Prerequisite: SON2400 SON2834  
Pre or Corequisite: SON2161 SON2844  
Lec Hrs=0 Lab Hrs=16 Oth Hrs=0 Fees=0. 00

SON2161 NEONATAL NEUROSONOLOGY (2)  
An introduction to the sonographic imaging of the neonatal and infant brain. Emphasis is placed on normal brain anatomy, congenital and acquired pathological conditions, as well as sonographic scanning techniques. Prerequisite: SON2400 SON2834  
Pre or Corequisite: SON2401 SON2844  
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=2. 00

SON2171 VASCULAR SONOGRAPHY (3)  
Venous and arterial anatomy and hemodynamic functions, both normal and abnormal are stressed. Sonographic imaging techniques for vascular structures and Doppler spectral analysis of normal and pathological patterns are also studied. Student must be an American Registry for Diagnostic Medical Sonography (ARDMS) Registered Sonographer. Special Fee Charged.  
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=2. 00

SON2175 VASCULAR SONOGRAPHY II (3)  
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. Prerequisite: SON2171  
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=2. 00

SON2176 VASCULAR SONOGRAPHY III (3)  
Venous and arterial anatomy and hemodynamic functions of the circulatory system of the neck and head, both normal and abnormal, are stressed, along with sonographic imaging techniques for vascular structures and Doppler analysis of normal and abnormal flow patterns. An understanding of the process of test validation and interpretation of test results will be covered. Prerequisite: SON2175
SON2400 INTRODUCTION TO ECHOCARDIOGRAPHY (2)
Anatomy of the heart and the procedures used in screening are introduced stressing recognition of the normal verses abnormal. Prerequisites: Program Admission or Permission by Program Manager and Prerequisite: SON1141 SON1824

Pre or Corequisite: SON2400L SON2834
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=2.00

SON2400L INTRODUCTION TO ECHOCARDIOGRAPHY LA (1)
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 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. Prerequisite: SON1824 SON2400 SON2400L SON2834
Pre or Corequisite: SON1141 SON2401
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00

SON2401 ECHOCARDIOGRAPHY II (2)
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. Prerequisite: SON2400 SON2834

Pre or Corequisite: SON2161 SON2401
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SON2401L ECHOCARDIOGRAPHY II LAB (1)
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. Prerequisite: SON1824 SON2400 SON2400L SON2834
Pre or Corequisite: SON1141 SON2401
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0.00

SON2834 CLINIC D (3)
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. Prerequisite: SON1141 SON1824

Pre or Corequisite: SON2400
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=102.18

SON2844 CLINIC E (3)
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. Prerequisite: SON2400 SON2834

Pre or Corequisite: SON2161 SON2401
Lec Hrs=0 Lab Hrs=0 Oth Hrs=384 Fees=102.18

SOP2002 SOCIAL PSYCHOLOGY (3)
This course provides scientifically based constructs used in understanding social phenomena and their impact on the individual. Identification of the social and psychological variables that give human behavior a predictable base is stressed. Topics considered include human nature, psychological development, sex role identification love, affiliation, aggression, image management, attitudes, opinion manipulation, morality, leadership, group
dynamics, attribution and construct theory. This course can be used for the AA degree.

Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**SOW2020 INTRODUCTION TO SOCIAL WELFARE (3)**
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.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

**SOW2054 SOCIAL SERVICE FIELD EXPERIENCE I (3)**
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. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**SPC1024 INTRODUCTION TO SPEECH COMMUNICATION (3)**
This course is designed to provide students with the fundamentals of speech communication including speaking and listening. Topics include: intrapersonal, interpersonal, verbal, nonverbal, small group communication, and public speaking in various cultural contexts.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

**SPC1511 ARGUMENTATION AND DEBATE (3)**
The student, upon completion of this course, should achieve proficiency in the principles of argumentation including analysis, evidence, inference, and refutation as they pertain to the debate situation in democratic society.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**SPC1608 INTRODUCTION TO PUBLIC SPEAKING (3)**
This course is designed to provide students with fundamental training and practical experience for speaking in public, business, and professional situations. Topics include: audience analysis, speech anxiety, critical listening, and preparation and delivery of speeches in various cultural contexts. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=0 Oth Hrs=0 Fees=0.00

**SPC2300 INTRODUCTION TO INTERPERSONAL COMMUNICATIO (3)**
Upon completion of this course, the student should demonstrate an understanding of the basic concepts of interpersonal communication with emphasis on perception, self-awareness, dyadic communication, small group communication, and communication conflict.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

**SPN1000 ELEMENTARY SPANISH CONVERSATION (3)**
A custom made course for those residents in the community who require a cursory knowledge of Spanish to help them communicate with Spanish speaking people. One hour language laboratory weekly. Special fee charged.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=15.00

**SPN1120 BEGINNING SPANISH I (4)**
Fundamentals of speaking, listening-comprehension, reading, writing, and Hispanic culture. Classroom practice and exercises supplemented by laboratory and/or multi-media designed to develop communicative competence and cultural sensitivity. Student expected to continue further implementation and expansion of their proficiencies in SPN1121 and SPN2220. Students are encouraged to study abroad. This course can be used for the AA degree.
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15.00

**SPN1121 BEGINNING SPANISH II (4)**
Continuation of SPN 1120. Further development of the basic skills in speaking, listening-comprehension, reading, writing, and appreciation of culture. Classroom practice and exercises supplemented by laboratory and/or multi-media activities designed to develop and enhance communicative competence and cultural sensitivity. Skills and concepts are further
polished in SPN 2220. Students are encouraged to study abroad. Prerequisite: SPN1120
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15. 00

SPN1170 SPANISH STUDY TRAVEL (3)
A course designed for students who wish to combine the study of Spanish with subsequent travel to a Spanish speaking region.
Lec Hrs=15 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

SPN2201 INTERMEDIATE SPANISH II (3)
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. Students are encouraged to study abroad. Prerequisite: SPN2220
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

SPN2220 INTERMEDIATE SPANISH I (4)
Continuation of SPN1121. Polishing of skills in speaking, listening comprehension, reading, writing and appreciation of culture and an introduction of new grammatical and idiomatic material. Classroom practice and exercises supplemented by laboratory and multimedia activities designed to develop and enhance communicative competence and cultural sensitivity. Compositions and readings in Hispanic prose and culture. Students are encouraged to study abroad. Prerequisite: SPN1121
Lec Hrs=64 Lab Hrs=0 Oth Hrs=0 Fees=15. 00
This course can be used for the AA degree.

SPN2240 INTERMEDIATE SPANISH CONVERSATION (3)
Course may be taken in conjunction with SPN2220 or SPN2201 but cannot displace either one of those courses as a college parallel requirement. The purpose of this course is to permit that student who wishes to increase his comprehension and speaking facility in Spanish to be in a class where the emphasis is totally on the oral approach and where a greater variety of topics will be discussed at a faster pace than the required SPN 2201 course would allow. Special Fee Charged. Prerequisite: SPN1120 SPN1112
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=15. 00
This course can be used for the AA degree.

SPN2340 BEGINNING SPANISH FOR SPANISH SPEAK (4)
This course is designed for Spanish Speakers who have an oral command of the language but whose knowledge of written and/or formal Spanish is incomplete. Class is conducted in Spanish with emphasis on improvement of spelling, grammar, vocabulary, reading, writing, and oral skills. Emphasis will be placed on the correction of typical errors created by the influence of the English language. Every unit will cover important cultural aspects of the Hispanic world. Prerequisite: To be a heritage or native speaker of Spanish. Special Fee charged.
Lec Hrs=48 Lab Hrs=16 Oth Hrs=0 Fees=15. 00
This course can be used for the AA degree.

SPN2955 STUDY ABROAD: ADVANCED COMPOSITION (3)
For students wishing to attain greater proficiency in spoken and written Spanish. Conversation and composition based on selected readings and a variety of contemporary topics. This course is used only in BCC Study Abroad Programs. Prerequisite: SPN2201
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

STA2023 STATISTICS (3)
A first course in statistical methods including such topics as collecting, grouping, and presenting data; measures of central tendency, position, and variation; theoretical distributions; probability; test of hypotheses; estimation of parameters; and regression and correlation. Use of statistical computer software and/or a scientific calculator (capable of performing 2-variable statistics) will be required. Recommendation of the Mathematics Department or at least a grade of "C" in the prerequisite course is required. Prerequisite: MAT1033
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=22. 00
This course can be used for the AA degree.
SWS2242C WETLANDS MANAGEMENT I (3)
This course provides the background to define a wetland using indigenous plant forms, aquatic conditions, geology and applicable laws and regulations. The strategies and techniques needed to maintain natural habitats are outlined. Course consists of classroom and extensive field work. Completion of any of the horticultural biology, zoology, or native plant courses would be helpful and is suggested.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

SYG2000 PRINCIPLES OF SOCIOLOGY (3)
This course is designed to introduce students to the basic terminology, theories, research and topics sociologists study. More specifically, students will be introduced to the relationship between the individual and society; how social structures, such as organizations, family, the mass media, etc., shape views, perceptions, and behaviors; and to society’s issues and problems. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SYG2010 SOCIAL PROBLEMS (3)
This course is an examination of the major social problems found in our changing social environment. More specifically, students will be introduced to a variety of topics which may include inequality based on class, race, ethnicity, education, age; violence in society; the changing family; social problems related to gender and sexual behavior; global social problems. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SYG2212 SOCIETY AND THE ENVIRONMENT (3)
A study of humanity’s social systems and the resulting impact of their technologies on the natural environment and natural life support systems.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

SYG2230 CONTEMPORARY RACE AND ETHNIC STUDIES (3)
A study of minority dominant relations with emphasis on ethnic, racial, and religious minorities.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

SYG2322 JUVENILE DELINQUENCY (3)
A study of juvenile and delinquent behavior and its development which focuses on the social structure of society to find patterns of delinquent activity and its causations.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

SYG2323 INTRODUCTION TO CRIMINOLOGY (3)
A study of crime and criminal behavior, and its cause and related effects on society, with an emphasis given to criminal theory, and the sociological implications of criminal behavior.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

SYG2340 SOCIOLOGY OF HUMAN SEXUALITY (3)
The Sociology of Human Sexuality is a general review of the scientific principles related to the study of human sexuality. Topics include: the cultural context of sexuality, theoretical perspectives of sexuality, research methods, gender/sex roles, sexual orientation, sexual coercion, sexual anatomy, sexual arousal, pregnancy, STDs, love and human intimacy, and human sexuality through the life course.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00 This course can be used for the AA degree.

SYG2421 MARRIAGE AND FAMILIES: INTERCULTUR (3)
A study of the institution of the family utilizing historical, cross cultural and sub-cultural comparisons to understand the background evolution and current familiar structures of the world. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

SYG2441 SOCIAL INSTITUTIONS (3)
A study of the institutions of pre-industrial, industrial, and post-industrial societies. Special emphasis is on theories of social organization, social change, and the exploration of each institution in world societies.
TAX2000 INCOME TAX I (3)
This course covers principles of federal income taxation applicable to individuals. The course is designed for students to acquire the basic knowledge necessary in the preparation of individual tax returns. Sample tax returns will be prepared. Prerequisite: TAX2000
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0, 00
This course can be used for the AA degree.

TAX2010 INCOME TAX II (3)
This course is a continuation of TAX2000 with emphasis on income tax laws applicable to partnerships and corporations. A brief survey of estate and gift taxes will be undertaken. Sample tax returns will be prepared. Prerequisite: TAX2000
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=0, 00
This course can be used for the AA degree.
TPA1291 TECHNICAL THEATRE LAB II (2)
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.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPA1292 TECHNICAL THEATRE LAB III (3)
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.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPA2000C INTRODUCTION TO THEATRE DESIGN (3)
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.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPA2060 SET DESIGN (3)
Research and execution of the visual environment of the play. Assigned projects will include pencil and ink drawings, layouts, ground plans, elevations, renderings, and models. Prerequisite: TPA2200. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPA2192L SUMMER THEATRE/TECHNICAL PRODUCTION (3)
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. Corequisite: TPP1190L.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPA2200 STAGECRAFT (3)
An investigation of the principles of stagecraft, lighting, props and set construction.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPA2220 INTRODUCTION TO STAGE LIGHTING (3)
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. Prerequisite: TPA2200
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPA2248 MAKEUP FOR STAGE AND TELEVISION (3)
The theoretical and practical application of all types of straight and character make-up for the stage and television.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPP1190L PERFORMANCE LAB I (1)
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.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0. 00
This course can be used for the AA degree.

TPP1191L PERFORMANCE LAB II (2)
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.
Lec Hrs=0 Lab Hrs=64 Oth Hrs=0 Fees=0.00

TPP192L PERFORMANCE LAB III (3)
Upon successful completion of this course, students will be able to analyze and create a dramatic character on stage in a theatrical production of the college. For each production, students will learn to understand the genre of the play and adopt appropriate acting styles and techniques. They will learn how to uncover clues in the script which will reveal character objectives and tactics. Additionally, students will create characters through analysis, improvisation, and the development of psychophysical actions grounded in the given circumstances of the play. This information will guide the student actor to make distinct choices regarding the physical and vocal qualities of each character being portrayed.
This course can be used for the AA degree.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00

TPP2110 ACTING I (3)
Study and development of acting skills concentrating on the student's ability to believe and exist in imaginary circumstances as if they were real, and to transmit those beliefs clearly and artfully to an audience.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

TPP2111 ACTING II (3)
Building on the foundations established in Acting I, Acting II focuses on a close examination of the dramatic text which becomes the basis for character development and scene work. Students will analyze and perform two scenes during the term. Additional experience is also gained with the monologue by analyzing and performing two longer speeches. Prerequisite: TPP2110
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

TPP2190L REHEARSAL AND PERFORMANCE I (3)
Participation in the audition, rehearsal and performance process of a theatrical stage production. Corequisite: TPA2192L.
Lec Hrs=0 Lab Hrs=96 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

TPP2260 PERFORMANCE IN FILM (3)
Introduction to the various approaches to acting on film and television. A number of genres will be examined including film acting, commercial acting, and various styles of television acting. Students will also study the evolving styles of film acting throughout the history of the medium. Prerequisite: TPP2110
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

TPP2300C DIRECTING (3)
An academic study and practical application of the art and craft of directing a play. An investigation of the components of the theatre experience as they relate to the work of the director. Prerequisite: TPP2111
Pre or Corequisite: TPA2200 TPP2500C TPP2700C
This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

TPP2500C MOVEMENT FOR THE ACTOR (3)
An academic study and practical application of body movement technique for the actor. Students will extend their own range of movement through vocal and physical effort training and free themselves from any personal movement habits. This course can be used for the AA degree.
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

TPP2531 STAGE COMBAT (1)
Armed and unarmed combat techniques for the stage.
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

TPP2700C INTRO TO VOICE (3)
An academic study and practical application of the efficient and effective use of the speaking voice, particularly in meeting the special demands of acting for the stage. Following a thorough introduction to the International Phonetic Alphabet students will learn the theories and principles of good voice and articulation of general American speech. 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, the learning resources language laboratory, and at home.

Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00

This course can be used for the AA degree.

TPP2701C VOICE AND ARTICULATION II (3)
Application of techniques studied in Intro to Voice, with emphasis on the study of vocal posture and the International phonetic Alphabet. Students will continue to improve articulation and pronunciation, as they learn to apply differentiation of sounds and adjustment of vocal posture to achieve a neutral American Dialect. Learned skills will then be utilized to master three popular stage dialects. 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, the learning resources laboratory, and at home.
Prerequisite: TPP2700C
Lec Hrs=32 Lab Hrs=32 Oth Hrs=0 Fees=0.00
This course can be used for the AA degree.

TRA1010 INTRODUCTION TO TRANSPORTATION & LOGISTICS (3)
This course deals with the role of logistics in the economy and the organization. Topics explored are customer service, logistics information systems, inventory management, material management and supply chain management. The objective is to explore the full scope of the transportation plant and its services as a necessary preparation to efficient use of the transportation system.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

TRA1154 SUPPLY CHAIN MANAGEMENT (3)
This course presents an integrated approach to the management of activities involved in moving goods and services from suppliers to customers. The course will focus on what employees and managers must do to ensure an effective supply chain exists in their organization. Students will learn about SCM functions, warehousing, purchasing and inventory, e-commerce, information flow and customer service.
Prerequisite: TRA1010
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

TRA1156 OPERATIONS MANAGEMENT FOR TRANSPORT (3)
This course covers the skills necessary for a supervisory role in logistics. It includes roles and responsibilities in managing different types of operations and general managerial functions and skills. Topics include the design and management of production operations, productivity, strategy, capacity planning, location, layout, resource management, just-in-time systems, materials requirement planning and project management.
Prerequisite: TRA1010
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

TRA2131 PURCHASING FOR LOGISTICS MANAGERS (3)
This course presents current and thorough coverage in the critical area of purchasing for logistics managers. Students gain insight and knowledge into the strategies, processes, and practices of purchasing, including demands placed on purchasing managers, the ethical, contractual and legal issues faced by purchasing professionals, and the impact of purchasing and supply chain management on the competitive success and profitability of the organization.
Prerequisite: TRA1010
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

TRA2930 SEMINAR IN GLOBAL TRADE & LOGISTICS (1)
This course focuses on current and emerging issues in global trade and logistics. 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 global trade and logistic topics such as, but not limited to: Functions comprising logistics; How logistics affects customer service, corporate performance and competitive advantage; Key logistics processes of supply chain management; Effective strategies for logistics managers; Key differences between domestic and international logistics; Developing strategies to effectively manage logistics; Recognizing the role played key logistics intermediaries that facilitate global trade.
Lec Hrs=16 Lab Hrs=0 Oth Hrs=0 Fees=0.00

TSL3080 ESOL ISSUES AND STRATEGIES I (3)
This course is designed to introduce the underlying issues, theories and practices of the
teaching of ESOL (English for Speakers of Other Languages)). The goal of this course is to develop the foundations of knowledge necessary to prepare educational professionals to understand the concepts upon which second language acquisition and instruction are based. Course emphasizes the Florida/LULAC Consent Degree and language/literacy development. 10 school-based hours Pre or Corequisite: EDF1005 EDF2085 EME2040 RED3342
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

TSL4081 ESOL ISSUES AND STRATEGIES II (3)
This course is designed to build on the foundation course in TESOL for students in integrated pre-service teacher education programs. The goal of this course is to link the theory and practice for effective teaching of ESOL students. The course will focus primarily on methods, curriculum and assessment of ESOL students in the areas of language development, and content areas. Effective strategies regarding reading instruction for ELL students will be emphasized. Prerequisite: EDF3280 EDF4430 EDG4410 EDP4004 EEX3011 TSL3080 Pre or Corequisite: EEX4843 RED3352 RED4519
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=39.75

WOH2040 WORLD IN THE 20TH CENTURY (3)
An examination of the major political, social, economic, intellectual, diplomatic, and military developments and events of the 20th century. A chronological approach to several major themes which frame the history of the contemporary world; the decline of European hegemony in the course of two major wars and a world depression; the concomitant challenge to western supremacy from Asia; a half-century of superpower hostility following the outbreak of the Cold War; and the transformation of global politics in light of the collapse of the U. S. S. R. and the end of the Cold War. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ZOO2010L GENERAL ZOOLOGY LABORATORY (1)
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. Pre or Corequisite: ZOO2010L. This course can be used for the AA degree.
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ZOO2010L GENERAL ZOOLOGY LABORATORY (I)
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. Pre or Corequisite: ZOO2010
Lec Hrs=0 Lab Hrs=32 Oth Hrs=0 Fees=81.00
This course can be used for the AA degree.

ZOO4713 COMPARATIVE VERTEBRATE ANATOMY & PH (3)
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. Pre or Corequisite: ZOO4713L
Lec Hrs=48 Lab Hrs=0 Oth Hrs=0 Fees=0.00

ZOO4713L COMPARATIVE VERTEBRATE MORPHOLOGY A (I)
The course is the accompanying laboratory course to PCB4273. 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. Pre or Corequisite: ZOO4713
Lec Hrs=0 Lab Hrs=48 Oth Hrs=0 Fees=42.00