College Credit
Course Descriptions

Statement on Florida's Statewide Course Numbering System

The course numbers appearing in the catalog are part of a statewide system of prefixes and numbers developed for use by all public post-secondary and participating private institutions in Florida. One of the major purposes of this system is to make transferring easier by identifying courses which are equivalent, no matter where they are taught in the State. All courses designated as equivalent will carry the same prefix and last three digits.

The classifying and numbering of courses was done by community college and university faculty members in each academic discipline. Their work was reviewed by faculty members in all of Florida's post-secondary institutions, who made suggestions and changes to be incorporated into the system.

The course numbering system is, by law, descriptive, not prescriptive. It in no way limits or controls what courses may be offered or how they are taught. It does not affect course titles or descriptions at individual schools. It seeks only to describe what is being offered in post-secondary education in Florida in a manner that is intelligible and useful to students, faculty and other interested users of the system.

The course numbering system was developed so that equivalent courses could be accepted for transfer without misunderstanding. Each public institution is to accept for transfer credit any course which carries the same prefix and last three digits as a course at the receiving institution.

For example, if a student has taken SYG-000 at a community college, the student cannot be required to repeat SYG-000 at the school to which the student transfers. Further, credit for any course or its equivalent, as judged by the appropriate faculty task force and published in the course numbering system, which can by used by a native student to satisfy degree requirements at a state university, can also be used for that purpose by a transfer student regardless of where the credit was earned.

It should be noted that a receiving institution is not precluded from using non-equivalent courses for satisfying certain requirements.

GENERAL RULE FOR COURSE EQUIVALENCIES

All undergraduate courses bearing the same alpha prefix and last three numbers (and alpha suffix, if present) have been agreed upon to be equivalent. For example, an introductory course in sociology is offered in over 40 post-secondary institutions in Florida. Since these courses are considered to be equivalent, each one will carry the designator SYG-000.

FIRST DIGIT

The first digit of the course number is assigned by the institution, generally to indicate the year it is offered—i.e., 1 indicates freshman year, 2 indicates sophomore year. In the Sociology example mentioned above, one institution which offers the course in the freshman year will number it SYG 1000; a school offering the same course in the sophomore year will number it SYG 2000. The variance in first numbers does not affect the equivalency. If the prefix and last three digits are the same, the courses are substantively equivalent.

TITLES

Each institution will retain its own title for each of its courses. The Sociology courses mentioned above are titled at different colleges "Introductory Sociology," "General Sociology," and "Principles of Sociology." The title does not affect the equivalency. The courses all carry the same prefix and last three digits; that is what identifies them as equivalent.

EQUIVALENCY OF SEQUENCES

In certain cases, sequences of courses in a given discipline are equivalent rather than the individual courses which make up these sequences. (For example, MAC-132, -133, -134). In these cases the subject matter topics may not be taught in the same sequence, course by course, in several institutions; however, upon completion of the full sequence at any of the several institutions, students have completed substantively equivalent content. These sequences are clearly identified in the Course Equivalency Profiles.

EXPLANATION OF PREFIXES AND NUMBERS

Prefixes and numbers in the course numbering system are not chosen at random; they are designed to describe course content in an organized fashion within a classification system developed for each subject matter area.

Generally each of the major classifications in a discipline is represented by a three-alpha prefix. In some cases, one three-alpha prefix has been sufficient for the entire discipline. A discipline may use as many prefixes as necessary to accommodate its major classifications. The logic of the system allows it to be infi-
naturally expandable with minimal disruption to existing numbers.

History, for example, has several prefixes: AFH, African History; AMH, American History; ASH, Asian History; EUH, European History; HIS, History-General; LAH, Latin American History; and WOH, World History. All history courses in the state will carry one of these prefixes.

A more specific example is AMH 2421, (not a current course at this institution):

**AMH 2 4 2 1 Early Florida History**

- **Broad Area of American History:** part of discipline of History
- **Sophomore level offering (at a particular institution):**
- **In taxonomy for AMH 400 series indicates "Areas in American History"**
- **In taxonomy for AMH this digit indicates courses in "History of Florida"**
- **Last digit in this case refers to group of equated courses dealing with "Early History of Florida"**

(Local titles are used for each particular course. The last three numbers are used to indicate equivalency.)

### EXCEPTIONS TO THE RULE FOR EQUIVALENCIES

The following are exceptions to the general rule for course equivalencies:

**A.** All numbers which have a second digit of 9 (Ex: ART 2905) are "place keeper" numbers for such courses as directed independent study, thesis hours, etc. Courses with -900 numbers must be evaluated individually and are not automatically transferable.

**B.** All internships, practicums, clinical experiences and study abroad courses, whatever numbers they carry, are not automatically transferable.

**C.** Performance or studio courses in Art, Dance, Theatre, and Music are not automatically transferable but must be evaluated individually.

### Statewide Course Numbering System

#### Course Prefix Titles Index

Listed below is an alphabetical index of the course Classification Discipline and the respective course three-digit Prefix. To identify the course Prefix, scan the alphabetical listing, locate the desired Classification Discipline, and then note the Prefix that distinguishes that specific discipline.

The courses which Florida Junior College at Jacksonville offers in that discipline can be ascertained by following the appropriate three-digit Prefix in the alphabetical listing of Course Descriptions in the following section of the Catalog.

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Zoology

Course Descriptions

The college credit courses listed in this section fall into three categories as identified by the following letter codes.

P – University Parallel – Any course identified by this symbol is intended to transfer to a university.

O – Occupational – The level and content of this course is tailored for those who wish to enter the business or industrial world.

D – Dual Purpose – Any course identified by this symbol is an occupational education course, eligible for transfer to a university under certain conditions – hence the course may serve both university parallel and occupational purposes.

All courses in the following list are not taught each term. Class schedules are published prior to each term that show the courses that will be offered. Many courses in this catalog have prerequisite courses listed in the course descriptions.

ACG – Accounting

ACG 1003 General Accounting I (D) 3 cr.
Prerequisite: None. A study of the sole proprietorship form of business organization with an emphasis on the following topics: the accounting cycle, journalizing and posting, deferred and accruals, adjusting and closing procedures, the worksheet, preparing financial statements, and the use of special journals and subsidiary ledgers. The course includes special problems for both a service-oriented business and a merchandising concern and requires the completion of a practice set. Three contact hours.

ACG 1004 General Accounting II (D) 3 cr.
Prerequisite: ACG 1003. A further study of proprietorship accounting with an introduction to partnerships and corporations. Emphasis will be placed on the following topics: inventory valuation, depreciation and fixed asset valuation, an introduction to the voucher system, bank reconciliations, the petty cash fund, payroll accounting, the use of data processing in accounting with an emphasis on internal control, and an introduction to partnerships and corporate accounting, including the basic characteristics and financial structure of these two business forms. A practice set is also included. The satisfactory completion of ACG 1003 and ACG 1004 is equivalent to the completion of ACG 2001. Three contact hours.

ACG 2001 Principles of Accounting I (D) 3 cr.
Prerequisite: None. A study of the principles of double entry records as related to the sole proprietorship form of organization. ACG 2001 includes all of the topics listed under ACG 1003 and ACG 1004 with the exception of partnership and corporate accounting. A practice set is included. ACG 1003 and ACG 1004 may be substituted for credit in ACG 2001. Three contact hours.

ACG 2011 Principles of Accounting II (D) 3 cr.
Prerequisite: ACG 2001. A study of accounting as related to partnerships and corporations with emphasis on the following topics: formation, liquidation, and dissolution of partnerships and corporations; accounting for stocks, long term liabilities and investments; job order cost systems, budgeting, and standard cost systems; analysis of financial statements, consolidated statements, and tax considerations in business decisions. Completion of a practice set is required. Three contact hours.

ACG 2100 Intermediate Accounting I (D) 3 cr.
Prerequisite: ACG 2011. A continuation of accounting principles including a review of the accounting cycle with special attention given to: working capital, an in-depth study of financial statements, cash, receivables, current liabilities, inventories, plant and equipment assets and intangible assets. Three contact hours.

ACG 2110 Intermediate Accounting II (D) 3 cr.
Prerequisite: ACG 2100. A continuation of ACG 2110 with coverage of the following topics: a study of corporate contributed capital, retained earnings and dividends, stockholders equity, long term debt and investments, pension plans and leases, accounting for income taxes, accounting for price level changes, and further statement analysis. Three contact hours.

ACG 2360 Cost Accounting (D) 3 cr.
Prerequisite: ACG 2110. Interpretation and analysis of cost into three major areas: (1) planning and controlling routine operations (break-even analysis; job order process cost systems), (2) inventory valuation and income determination (standard costing), (3) policy making and long-range planning (capital budgeting). Three contact hours.

ACG 2500 Fund Accounting (D) 3 cr.
This course is a study of the accounting methods and procedures used by not-for-profit organizations such as governmental agencies, hospitals, and charitable organizations. Three contact hours.

ACT – Air Conditioning Trades

ACT 1020 Introduction to Air Conditioning and Refrigeration (O) 4 cr.
A course designed to teach the refrigeration, heat production, heat transfer and specific heat, temperature pressure chart, pressure relations, silver brazing, soft soldering, flaring and swaging. Eight contact hours (theory/laboratory).
ACT 2060  Psychrometrics and Heat Load Calculations (O)  4 cr.
A course designed to teach psychrometrics charts, measurement and properties of air and heat load calculations on residential and commercial buildings. Eight contact hours (theory/laboratory).

ACT 2110  Air Conditioning and Refrigeration Wiring Diagrams and Schematics (O)  4 cr.
Prerequisites: ACT 1020, ACT 2020.
This course is designed to teach air conditioning wiring diagrams and schematics on A/C central systems, A/C window units, oil furnaces, gas furnaces, A/C heat pumps, and trouble-shooting the electrical system in all air conditioning and refrigeration equipment. Six contact hours: two lecture hours; four laboratory hours.

ACT 2620  Air Conditioning: Commercial and Residential (O)  4 cr.
A course designed to teach installation and service techniques including piping refrigerant lines and parking water cooled condensers. Eight contact hours (theory/laboratory).

ACT 2850  Basic Air Conditioning Trouble-shooting (O)  4 cr.
Prerequisite: EER 1210. A course designed to teach basic air conditioning trouble-shooting. Trouble faults on the electrical circuits, heating or cooling complaints, problem solving of faults. Eight contact hours (theory/laboratory).

ADV - Advertising

ADV 2000  Advertising (D)  3 cr.
Prerequisite: None. Introduction to the field of retail advertising, its purpose, institutions and functions. Includes planning and advertising, local media and types of retail advertising. Three contact hours.

AER - Automotive/Engine Repair

AER 1000  Basic Technician Skills (O)  1 cr.
This course is designed to teach the basic fundamentals of the vehicle mechanical trade. Topics include: Hand tool use, care and identification, specialized equipment use and functions, and parts and assemble identification. Emphasis will be placed on tools, equipment and general shop safety. One contact hour.

AER 1100  Vehicle Electrical and Support Systems (O)  4 cr.
A course designed to teach the fundamentals of electrical and vacuum circuits, fuel and emission systems and interpreting wiring/vacuum diagrams and to provide practical experience in methods of safety checking, prechecking these systems prior to repair and/or adjustment. Topics include batteries, starters, charging components, carburetors, fuel delivery, compression, cooling, a variety of emission controls, and engine tuning. Special emphasis will be given to safety procedures, special tools/equipment, manufacturers manuals and technical data. Six contact hours: two lecture hours; four laboratory hours.

AER 1114  Basic Vehicle Machinist (O)  4 cr.
A course designed to teach the principles and procedures of automotive/light truck remachining and to provide practical experience in resurfacing, realigning and restoring engine components to prescribed tolerances. Topics include measuring, technical data, ferrous/nonferrous metal types, crack identification, cylinder liners, pistons, crank/camshafts, lubricating/cooling methods and cleaning/descaling methods. Special emphasis will be given to safety procedures, special tools, equipment operation, maintenance and methods of quality control. Six contact hours: two lecture hours; four laboratory hours.

AER 1120  Steering and Suspension Systems (O)  4 cr.
A course designed to teach the principles of operations of steering and suspension systems and provide practical experience in diagnosing, adjusting and/or repairing suspension and steering systems. Topics include alignments, suspension system overhaul, steering columns, sector, power steering, hydraulics, McPherson struts and wheel balancing. Special emphasis will be given to safety procedures, special tool/equipment and manufacturer's data. Six contact hours: two lecture hours; four laboratory hours.

AER 1121  Braking Systems (O)  4 cr.
A course designed to teach the principles of braking methods and designs to provide practical experience in the service, repair and maintenance of these systems. Topics include inspection procedures, measurements, machining drums and rotors, hydraulics, power boosters, hydraulic assist, self-adjusters and emergency brakes. Special emphasis will be given to safety procedures and special tools, instruments and equipment to be used. Six contact hours: two lecture hours; four laboratory hours.

AER 1131  Transmission and Drive Systems (O)  4 cr.
A course designed to teach the principles and operations of automatic transmission, standard transmission, clutches, propeller shafts and differentials and to provide practical experience in diagnosing, maintaining, repairing, and adjusting using manufacturer's data. Topics include torque multiplication/transfer, conventional gearing, differential types and application, hydraulics, planetary gearing and fluid circuitry. Special emphasis will be given to safety procedures and special tools and equipment. Six contact hours: two lecture hours; four laboratory hours.

AER 1160  Introduction to Vehicle Service/Parts Supervision (O)  3 cr.
This course is designed to teach the organization and operation of service and parts departments. Topics include: Floor planning, floor plan alteration, equipment, and software selection; employee/interdepartmental/customer relations, finance, forecasting; inventory methods, merchandising and marketing. Emphasis will be placed on communications and production/supervisory methods. Special emphasis will be placed on noise/pollution/environmental procedures, quality control and the prevention of customer/employee dissatisfaction. Three contact hours.

AER 1180  Integrated Vehicle Systems (O)  4 cr.
Prerequisite: AER 1100. An advanced course designed to teach the principles of cooling, lubricating, charging, starting, fuel injection, and emission systems and provide practical experience in identification, diagnosis repairs and adjustments required. Topics include test equipment usage, evaluating test results, performing repairs and/or adjustment using manufacturer's specifications and measurements; special emphasis will be placed on safety, quality control, accuracy and cleanliness procedures. Six contact hours: two lecture hours; four laboratory hours.

AER 1221  Paint Formulas and Application (O)  4 cr.
A course designed to teach the principles and operations of paint repairing and refinishing, to provide practical experience mixing, color matching and blending. Topics include paint additives, air regulation, priming, spot refinishing, color coating and complete refinishing. Emphasis will be given to health management and safety procedures. Six contact hours: two lecture hours; four laboratory hours.
AER 1271 Introduction to Body Shop Supervision (O) 3 cr.
This is a course designed for the in-depth study of body shop management. Topics include organization plan of body shops, work schedules and distribution, use of pricing manuals, estimating and pricing of work, personnel management, marketing and promotional methods, financial analysis management, cost accounting, inventory control and customer relations. Three contact hours.

AER 2004 Internal Combustion Engines (O) 4 cr.
A course designed to teach principles and operations of internal combustion engines and to provide practical experience repairing and/or overhauling automotive/light truck power plants and their components. Topics include problem diagnosis, measuring, cleaning, valve train repair, cooling/lubricating system repair, in and out of chassis overhaul and the use of manufacturer's data. Special emphasis will be given to safety procedures, special tools, instruments and equipment to be used. Six contact hours: two lecture hours; four laboratory hours.

AER 2112 Advanced Vehicle Diagnosis (O) 4 cr.
Prerequisites: AER 1100 and AER 1180. A course designed to teach methods of diagnosing failures, misadjustments or problems which affect standard vehicle operation. Specialized topics include engine electrical/electronic, vacuum, fuel and emission systems. Also in vehicle electrical, vacuum and accessory systems. Emphasis will be given to the use of diagnostic equipment, diagnostic manuals, safety and technical data. Six contact hours: two lecture hours; four laboratory hours.

AER 2115 Advanced Vehicle Machinist (O) 4 cr.
A course designed to teach advanced principles and procedures of automotive/light truck remanufacturing and to provide practical experience aligning connecting rods, honing cylinders, resurfacing cylinder heads, flywheels, brake drums/rotors, line boring and crankshaft finishing to exacting tolerances. Additional topics include drilling, rethreading, and remanufacturing engines using technical data. Special emphasis will be given to safety procedures, quality control and the correct use of special tools/equipment. Six contact hours: two lecture hours; four laboratory hours.

AER 2169 Automotive/Light Truck Career Preparation (O) 3 cr.
A course designed to teach the skills required for employment, advancement and/or promotion in the automotive, light truck technology field as service advisors, dispatchers, quality controllers, service cashiers or assistants to supervisors. Topics include estimating, customer advising, "flat rate" interpreting, repair order preparation and completion, "work flow" control, payroll methods, cashier balance procedures, prepost vehicle testing and communicative skills. Emphasis will be placed on current state laws for consumer protection, on the job motivation, service sales, product awareness/dedication and employment accountability. Three contact hours.

AER 2171 Heating and Air Conditioning (O) 4 cr.
A course designed to teach the principles and operation of automotive/light truck heating and air conditioning systems, and to provide practical experience in the diagnosis, servicing and repair of these systems. Topics include: functional testing of refrigeration components and/or assemblies; electrical and vacuum circuits; also, repair, replacement, and/or overhaul as required. Special emphasis will be given to safety procedures, specific tools, equipment and the use of technical data. Six contact hours: two lecture hours; four laboratory hours.

AER 2210 Body Damage Analysis and Repair (O) 4 cr.
A course designed to teach the principles and operation of repairing body damage and to provide practical experience restoring dents, dings and creases to original contours. Topics include: metal stress, heat shrinking, hydraulic stretching, forming, filling and preparation for color application. Emphasis will be given to health management and safety procedures. Six contact hours; two lecture hours; four laboratory hours.

AER 2214 Body Panels and Frames (O) 4 cr.
Prerequisite: AER 2210. A course designed to teach the principles of metal panel replacement, frame and unibody measuring, alignment and straightening; also, glass replacement and sealing. Topics include inner/outer panel removal, sectioning and reinstalling using cutting, brazing, welding and fiberglass filling techniques. Also windshield, stationary back and side glass removal and replacement. Special emphasis will be given to safety procedures, special tools and equipment and their use. Six contact hours: two lecture hours; four laboratory hours.

AER 2272 Advanced Body Repair and Appraising (O) 4 cr.
Prerequisites: AER 210 and AER 2214. A course designed to teach the principles of estimating, appraising and contracting. Topics include: major sectioning of quarter and half units, preparing minor/major fire or water submersion claims. Topics include major alignment, fitting, connecting sections to existing roofs, floor panels and pillars, also sealing and/or aligning glasses, "T" tops, doors, decks, and gates. Special emphasis will be given to safety procedures, special tools and/or equipment. Six contact hours: two lecture hours; four laboratory hours.

AER 2941 Vehicle Machinist Practicum (O) 3 cr.
Prerequisites: AER 1114 and AER 2115. This course is designed for the student to gain practical experience of machine shop operations to be prepared for jobs in the industry. Topics include: inspection and diagnosis of correct remanufacturing procedures of vehicle engine clutch and brake parts. Emphasis will be placed on cylinder head reconditioning, crankshaft grinding, connecting rod reconditioning, line honing, cylinder boring, clutch and brake machining and fitting bearings. Special emphasis will be placed on safety, quality control and equipment use. Six contact hours: six laboratory hours.

AET – Alternative Energy Technology

AET 2103 Passive Solar Construction (O) 3 cr.
This course is designed to provide the student with an understanding of architectural details and construction techniques in the design and construction of structures that utilize solar energy without primary dependence on mechanical means to collect, transport and distribute solar heat/cooling. The areas to be studied are heat and cooling by means of direct gain, indirect gain, isolated gain and hybrid/combination systems. Three contact hours.

AMH – American History

AMH 2010 United States History I (P) 3 cr.
Prerequisite: None. United States History to 1865. Emphasizes the European background, Revolution, Articles of Confederation, the Constitution, problems of the new republic, sectionalism, manifest destiny, slavery and the War Between the States. Three contact hours.
AMH 2020 United States History II (P) 3 cr.
Prerequisite: None. A history of the United States from 1865 to the present. Includes the Reconstruction, growth of big business, the agrarian revolt, Latin American affairs, the Progressive Movement, the first World War, and political, economic, and world affairs since World War II. Three contact hours.

AMH 2420 History of Florida (P) 3 cr.
Prerequisite: None. History of Florida with emphasis on the explorations, U.S. acquisitions, Convention of St. Joseph, Civil War and Reconstruction, and Florida's growth in the 20th Century. Three contact hours.

AMH 2571 Afro-American History and Culture I (P) 3 cr.
Prerequisite: None. A survey course dealing with the trends, institutions, events, and personalities among black people in the American past. A brief treatment of the African origin, the black people during the Revolutionary War, the development of slavery and the black people and the Civil War and Reconstruction is presented. The origin of racism, general minority problems, cultural appreciation, and black ideas are stressed. Three contact hours.

AMH 2572 Afro-American History and Culture II (P) 3 cr.
Prerequisite: None. A continuation of AMH 2571 with special emphasis on present and future projected developments among black people. The black people and the two World Wars and their aftermath are presented, as well as the roots and manifestations of the Civil Rights and Black Power movements. Three contact hours.

AML – American Literature

AML 2012 American Literature I (P) 3 cr.
Prerequisite: ENC 1102. A critical study of selections from American Literature: Colonial period to the late 19th Century. Three contact hours.

AML 2023 American Literature II (P) 3 cr.
Prerequisite: ENC 1102. A critical study of selections from American Literature: late 19th Century to the present. Three contact hours.

AML 2271 Afro-American Literature (P) 3 cr.
A survey course that treats the major periods of Afro-American literature from its beginnings in America to the present. Attention will be given to the African background. Concentration centers on the writers' views of themselves and the political, economic, and social forces that operate on them. Thematically, the course considers the cyclic patterns of assimilation, self-awareness, and the desire for self-determination in the literature. Three contact hours.

ANT – Anthropology

ANT 2310 Introduction to North American Indians (P) 3 cr.
A survey of North American Indians from their first appearance on this continent through their development into tribes. Three contact hours.

ANT 2410 Cultural Anthropology (P) 3 cr.
Prerequisite: None. The study of humanity, the concept of culture, and components of culture with emphasis on the different cultural adaptations of humanity world wide. Three contact hours.

ANT 2511 Physical Anthropology (P) 3 cr.
Prerequisite: None. The study of the human as a biological and cultural animal including evolutionary adaptations, and the human place in the ecological system. Three contact hours.

APA – Applied Accounting

APA 2321 Hotel-Motel Accounting (O) 3 cr.
A course of study related to the need of and the application of accounting principles and concepts through financial analysis, cost, budgeting and investment, for hospitality properties with emphasis on controller functions, profit and loss statement, statistical analysis and forecasts. Three contact hours.

APA 2361 Credit Union Accounting (O) 3 cr.
This course covers the specific areas needed to account for the transactions found in credit union operations. Topics include credit union accounting with: books of original entry; subsidiary ledgers and controlling accounts; purchases, sales, and uncollectible accounts; voucher systems; cash receipts and cash disbursements; accruals and deferreds; payroll; financial statements and managerial accounting. Three contact hours.

APB – Applied Biology

APB 1150 Life In Its Biological Environment (P) 3 cr.
Prerequisite: None. An introduction to biological structure, function processes, principles and concepts. This course is designed to fulfill the general education requirement. Three contact hours.

APB 1150L Biology Lab (P) 1 cr.
Corequisite: APB 1150. To provide each student individualized, self-paced practice in specific areas of need as the student attempts to improve biological skills. Two contact hours (laboratory).

APB 1220C Dental Assisting Anatomy and Physiology (O) 4 cr.
This course is intended for students in the Dental Assisting program. The course consists of a systematic study of the human body in health and disease. The sciences of anatomy, physiology and pathology are emphasized, but elements of microbiology and chemistry are included in the examination of the structure and function of all the body's systems. Five contact hours: three lecture hours; one two-hour laboratory.

APB 1260 Cardiopulmonary Anatomy and Physiology (O) 4 cr.
Prerequisite: None. This course is designed to offer a thorough anatomical and physiological examination of the cardiopulmonary system. An introduction to electrocardiography and chest roentgenology is included. Additionally, a correlated examination of the renal and circulatory systems will be included where it is relevant. Four contact hours.

APB 1650 Pharmacology for the Respiratory Therapist (D) 2 cr.
Prerequisite: APB 1260. This course offers the student a detailed understanding and knowledge of the basic factors involved in the field of pharmacology for the respiratory therapist and the application of this field to pulmonary diseases. Two contact hours.

APB 2190C Human Anatomy and Physiology I (P) 3 cr.
The student will benefit by taking CHM 1020, CHM 1040C, APB 1150, BSC 1011C, ZOO 1010C, or High School Chemistry prior to enrolling in APB 2190C, which is a study of the
gross morphology and physiology of the human. The course includes sections concerned with cells; tissues; the muscular-skeletal system; circulation; the lymphatic system; the digestive system; and the integument. Four contact hours: two lecture hours; two laboratory hours.

**APB 2191C  Human Anatomy and Physiology II (P)  3 cr.**
Prerequisite: APB 2190C. A continuation of APB 2190C. Topics covered include: the endocrine system; the reproductive system; the nervous system; special senses; the respiratory system; the excretory system; and fluids and electrolyte balance. Four contact hours: two lecture hours; two laboratory hours.

**APB 2293  Pulmonary Pathology (D)  3 cr.**
Prerequisite: APB 1260. Pulmonary pathology gives an in-depth study of the more common diseases of the cardio-pulmonary system including their etiology, pathophysiology, clinical picture, and treatment. Three contact hours.

**ARC – Architecture**

**ARC 2120C  Architectural Drafting (D)  3 cr.**
Prerequisite: ETD 1100C. A survey of the theory and practices involved in the preparation of a set of architectural plans. Emphasis is placed on the floor plan design, details, elevations and perspectives. Consideration is also given to FHA standards, site selections, and common home construction techniques. Four contact hours: two lecture hours; two laboratory hours.

**ARH – Art History**

**ARH 1000  Art Appreciation (P)  3 cr.**
Prerequisite: ENC 1101 or satisfactory score on placement test. A course designed to supply the non-art major with a foundation for understanding the visual arts through introduction to different media of art expression. The course includes reading and writing competencies. Three contact hours.

**ARH 2050  Art History I (P)  3 cr.**
Prerequisite: ENC 1101 or satisfactory score on placement test. A history and critical study of painting, sculpture, and architecture from prehistoric times to the Renaissance. The course includes reading and writing competencies. This course is designed primarily for art majors. Three contact hours.

**ARH 2051  Art History II (P)  3 cr.**
Prerequisite: ARH 2050, ENC 1101 or satisfactory score on placement test. A continuation of the history and criticism of art from the Renaissance to the present. This course includes reading and writing competencies. This course is designed primarily for art majors. Three contact hours.

**ART – Art**

**ART 1101C  Crafts as an Element of Design (P)  2 cr.**
This course is planned as an introduction to contemporary and traditional crafts. Weaving, batik, silk screening, tie dye, block printing, and leather crafts will be included. This course may be repeated for additional credit for up to a combined total of three semesters. Maximum, six semester hours credit total. Four contact hours: one lecture hour and three studio hours.

**ART 1130C  Textile Design (P)  3 cr.**
This course is an introduction to textile processes including silk-screen printing, batik, tie and dye, and block printing. Six contact hours: two lecture hours and four studio hours.

**ART 1134C  Beginning Weaving (P)  3 cr.**
This course is an introduction to fiber processes includingloff loom techniques, primitive loom construction and weaving, and simple four-harness loom weaving. Techniques will include coiling, twining, dyeing, knotting, tapestry, and twill variations. Students who have already received credit for ART 1101C, Crafts as an Element of Design, (no longer a current course) cannot also receive credit for ART 1134C. Six contact hours: two lecture hours and four studio hours.

**ART 1135C  Intermediate Weaving (P)  3 cr.**
Prerequisite: ART 1134C or permission of the instructor. This course is designed to supplement beginning weaving and to increase the student’s weaving vocabulary. Processes include double weave, supplemental weft techniques, pattern drafting, and color study. Six contact hours: two lecture hours and four studio hours.

**ART 1136C  Advanced Weaving (P)  3 cr.**
Prerequisites: ART 1134C and ART 1135C or permission of the instructor. This course is designed for the experienced weaver who wants to investigate advanced processes and further skills. Emphasis will be placed on the aesthetic handling of fibers. Six contact hours: two lecture hours and four studio hours.

**ART 1600C  Photography I (P)  3 cr.**
This course is an introduction to the use of the camera, laboratory and materials, and methods and procedures for the creative applications of individual expressions in photography. Emphasis will be on color slide materials. The student must have a 35mm camera or equivalent. Materials fee $15.00. Six contact hours: two lecture hours and four studio hours.

**ART 1601C  Photography II (P)  3 cr.**
Prerequisite: ART 1600C. This course is a continuation of ART 1600C. Black and white and color processing are emphasized. Materials supply $15.00. Six contact hours: two lecture hours; four laboratory hours.

**ART 2701C  Sculpture I (P)  3 cr.**
This course is designed for the beginning sculpture student. Modeling, carving and casting will be explored in a variety of techniques and materials such as plaster and clay. Materials fee $15.00. Six contact hours: two lecture hours and four studio hours.

**ART 2702C  Sculpture II (P)  3 cr.**
Prerequisite: ART 2701C or permission of the instructor. This course is a continuation of ART 2701C. New and more advanced techniques and materials will be explored. Individual projects will be encouraged. This course may be repeated twice for additional credit to a maximum of nine credit hours. Materials fee $15.00. Six contact hours: two lecture hours and four studio hours.

**ART 1201C  Design I (P)  3 cr.**
An analytical approach to the elements and principles of design. Emphasize on line, form, texture, and color in both two- and three-dimensional space organizations. Six contact hours: two lecture hours; four studio hours.

**ART 1202C  Design II (P)  3 cr.**
Prerequisite: ART 1201C. A continuation of ART 1201C. Six contact hours: two lecture hours; four studio hours.

**ART 1300C  Drawing I (P)  3 cr.**
Introduction to the basic discipline of drawing through the use of still life, landscape, and the figure. Six contact hours: two lecture hours; four studio hours.

**ART 1301C  Drawing II (P)  3 cr.**
Prerequisite: ART 1300C. A continuation of ART 1300C. Six contact hours: two lecture hours; four studio hours.
ART 2110C Ceramics: Hand-Building I (P) 3 cr.
The student will benefit by taking ART 1300C and ART 1201C prior to enrolling in ART 2110C. This course introduces the basic methods of ceramic production in hand-building and glaze application. Six contact hours: two lecture hours; four studio hours.

ART 2111C Ceramics: Hand-Building II (P) 3 cr.
Prerequisite: ART 2110C. This course is a continuation of ART 2110C. Emphasis on creativity and special problems. Kiln stacking and firing also included. Six contact hours: two lecture hours; four studio hours.

ART 2112C Ceramics: Wheel Throwing I (P) 3 cr.
Prerequisite: ART 2110C. This course introduces the basic methods of wheel throwing along with kiln stacking and glazing techniques. Six contact hours: two lecture hours; four studio hours.

ART 2113C Ceramics: Wheel Throwing II (P) 3 cr.
Prerequisite: ART 2112C. This course is a continuation of ART 2112C. Emphasis is on perfecting the technique of wheel throwing and on creativity. Ceramic sculpture is included. Six contact hours: two lecture hours; four studio hours.

ART 2115C Glaze Exploration (P) 3 cr.
This course includes practice in the use of the nature of glazing techniques such as mishima and sgrafitto, plus application and testing procedures. Six contact hours: two lecture hours; four studio hours.

ART 2400C Printmaking I (P) 3 cr.
Prerequisite: ART 1300C or ART 1301C. This course consists of experiment with line, tone, etching, intaglio and relief printing. Six contact hours: two lecture hours; four laboratory hours.

ART 2401C Printmaking II (P) 3 cr.
Prerequisite: ART 2400C. A more detailed study of intaglio materials and techniques. (This course may be repeated for additional credit for up to a combined total of three semesters with permission of the instructor. Nine semester hours total maximum.) Six contact hours: two lecture hours; four studio hours.

ART 2510C Painting I (P) 3 cr.
Prerequisite: ART 1301C. A comprehensive analysis of painting techniques and contemporary approach to still life, landscape, and figure compositions. Materials fee $15.00. Six contact hours: two lecture hours; four studio hours.

ART 2520C Painting II (P) 3 cr.
Prerequisite: ART 2510C. A continuation of ART 2510C with emphasis on exploratory work achieved by means of research evaluation of traditional and contemporary compositions and contributions of artists, past and present. Emphasis on the abstract and non-objectives. Materials fee $15.00. Six contact hours: two lecture hours; four studio hours.

ASC – Aeronautical Science

ASC 1000 Principles of Flight (O) 3 cr.
An introduction to the fundamentals of flight, including basic aerodynamics, aircraft characteristics, and a look at aircraft of the past, present and future. Three contact hours.

ASC 1001 Introduction to Aviation/Aerospace (O) 3 cr.
The impact of aviation and space is stressed. An exploratory course of general interest to the novice and of special value for elementary and secondary school teachers due to its interdisciplinary approach. Aviation history, air and space age, careers in aviation and aerospace, nature of space, rocketry, science of flight, weather theory, cartographics, airports, cross-country flying, and physiology of flight are introduced. Three contact hours.

ASC 1005 History of Air Transportation (O) 3 cr.
A chronological history of man’s quest for flying and how the Air Traffic Control System came into existence. Three contact hours.

ASC 1210 Aviation Weather (O) 3 cr.
A study of the fundamentals of aviation meteorology and its effects on aircraft and the air traffic control system. Three contact hours.

ASC 1310 Federal Air Regulations (O) 3 cr.
A course designed to familiarize the student with federal regulations that govern pilots, aircraft operations and air traffic control. Three contact hours.

ASC 1690 Environment of the Air Traffic Controller (O) 3 cr.
A candid look at the air traffic controller’s language, tools, and profession. Three contact hours.

ASH – Asian History

ASH 2005 History of the Far East (P) 3 cr.
A history of the Far East from early modern times. Three contact hours.

AST – Astronomy

AST 1002 Introduction to Astronomy (P) 3 cr.
The student will benefit by taking High School Algebra or MAT 0024 prior to enrolling in this course. This is a general education course and is not intended for the student who is going to major in astronomy or other sciences. The student will become acquainted with the solar system with emphasis on the student’s own planet and its satellite, the moon. The student will also study other planets, satellites, comets, meteors, the Milky Way and other galaxies, and the theories of the universe. The stars and planets will be discussed relevant to the most modern ideas. Three contact hours.

AST 1022L Astronomy Laboratory (P) 1 cr.
Pre- or Corequisite: AST 1002. This is a laboratory course which is intended to supplement AST 1002, Introduction to Astronomy. It is recommended that the student have a working knowledge of mathematics at a level equivalent to MAT 0024. Observations of the moon, planets, stars, and other objects will be made. Students will learn to use various types of equipment and simple procedures for obtaining useful astronomical data. If the weather is unfavorable, indoor laboratory exercises will be scheduled. Two contact hours.

ATF – Aviation Technology Flight

ATF 1000 Basic Flight I (D) 3 cr.
Corequisite: FAA Medical Certificate-Class III. This course consists of the instruction and flight training necessary for the student to accomplish a first solo flight in an airplane, and to achieve a high degree of flying proficiency in basic flying maneuvers. The stages that the student will progress through are: Pre-Solo, Supervised Solo, Basic Flying Techniques, and Solo Practice. Three contact hours.

ATF 1010 Ground School – Private Pilot (D) 3 cr.
Classroom instruction. Preparation for FAA Private Pilot’s Written Examination. Includes: science of flight, airplane
systems and instruments; weight, balance and performance; meteorology, physiology of flight, basic navigation, radio navigation, air traffic control and communications, Airman's Information Manual, and Federal Aviation Regulations. Three contact hours.

**ATF 1100 Basic Flight II (D)** 3 cr.
This course is a continuation of ATF 1000 and consists of the instruction and flight training necessary for the student to complete the minimum requirements that will qualify the student to take the FAA Private Pilot Certificate Flight test. In addition, the student will be introduced to advanced-maximum performance and precision flight maneuvers. The stages the student will progress through are: Pre-Solo Cross Country, Solo Cross Country, Private Pilot Certificate Review, Advanced Night Operations and Introduction to Advanced and Precision Maneuvers. Three contact hours.

**ATF 2201C Intermediate Flight I (D)** 3 cr.
Prerequisite: FAA Private Pilot Certificate or FAA Private Pilot Certificate plus equivalent experience based on CFI evaluation. This course consists of the instruction and flight training that will lead to the skill and competence necessary to maneuver the aircraft safely and accurately in VFR condition within the National Airspace System, during both day and night operations. The student will also receive additional introduction and practice in the advanced maximum performance and precision maneuvers. In addition, the student will receive instruction in Basic Attitude Instrument Flying and Radio Navigation. The stages the student will progress through are: Advanced Cross Country Navigation, Advanced Solo Cross Country Navigation, Precision Maneuver Proficiency, Basic Attitude Instrument Flying and Radio Navigation. Three contact hours.

**ATF 2202C Intermediate Flight II (D)** 3 cr.
A second of three phases of flight training leading to the Commercial Pilot Certificate. A total of 70 hours of instruction is provided, including 10 hours of dual flight, 30 hours of solo flight, 10 hours of oral instruction and briefing, and 20 class hours. Three contact hours.

**ATF 2203C Intermediate Flight III (D)** 3 cr.
The final of three phases of flight training leading to the successful completion of the FAA Commercial Pilot Certificate. A total of 48 hours of instruction is provided, including eight hours of dual flight, 32 hours of solo flight, eight hours of oral instruction and flight briefings. Three contact hours.

**ATF 2300 Advanced Flight (D)** 3 cr.
Prerequisites: FAA Private Pilot Certificate or FAA Private Pilot Certificate plus equivalent experience based on Certified Flight Instructor's evaluation. This course consists of the instruction and flight training necessary to qualify for the FAA Instrument Pilot Rating. The total of 70 hours of instruction includes 30 hours of dual flight, 10 hours of oral instruction and briefing, and 30 hours of oral instruction and briefing in the classroom. Three contact hours.

**ATM – Aviation Technology Maintenance**

**ATM 1300 Aircraft Airframe Mechanic (O)** 3 cr.
This course will provide instruction in theory, maintenance procedures and safety precautions associated with aircraft airframe mechanics. Successful completion of the course will assist the student in preparing for the FAA licensing examination as an Airframe and Powerplant Mechanic. Three contact hours.

**ATM 1700 Aviation Technology Maintenance (O)** 3 cr.
This course will provide instruction in theory, maintenance procedures, and safety precautions associated with airframe and powerplant mechanics. Successful completion of the course will assist the student in taking the FAA licensing examination as an Airframe and Powerplant Mechanic. Three contact hours.

**ATM 1800 Aircraft Powerplants Mechanic Practicum (O)** 2 cr.
This course will provide instruction in theory, maintenance procedures and their practical application along with safety precautions associated with powerplant mechanics. Successful completion of the course will assist the student in preparing for the FAA licensing examination as an Airframe and Powerplant Mechanic. Four contact hours. (Eight weeks).

**ATM 1810 Aircraft Airframe Mechanic Practicum (O)** 2 cr.
This course will provide instruction in theory, maintenance procedures and their practical application along with safety precautions associated with airframe mechanics. Successful completion of the course will assist the student in preparing for the FAA licensing examination as an Airframe and Powerplant Mechanic. Four contact hours. (Eight weeks).

**ATT – Aviation Technology Theory**

**ATT 1110 Ground School III – Commercial Pilot (O)** 3 cr.
Prerequisite: Pilot Certificate. Preparation for FAA Commercial Pilot Written Examination. Review of weight and balance; airplane performance; air traffic control and communication; airmen's information; physiology of flight. Course concentrates on advanced flight computer, advanced meteorology, advanced VFR navigation and radio, and commercial pilot federal aviation regulations. Three contact hours.

**ATT 1120 Ground School IV – Instrument Pilot (O)** 3 cr.
Prerequisite: Private Pilot's Certificate. Preparation for FAA Instrument Pilot Written Examination. Review of airplane systems and instruments. Advanced meteorology; basic radar and transponder. Course concentrates on IFR clearance shorthand, IFR flight charts, IFR planning and VOR flights, IFR regulations and procedures, and instrument approaches. Three contact hours.

**AVM – Aviation Management**

**AVM 2431 The Flight Service Station (O)** 3 cr.
Prerequisites: ASC 1210, ASC 1310. A study of the operation in a flight service station to include weather observation, air-ground communications and flight planning briefing. Three contact hours.

**AVM 2821 The Air Traffic Control Tower (O)** 3 cr.
Prerequisites: ASC 1210, ASC 1310, ASC 1690. A study of the operation of a control tower, visual separation techniques and the inter-relationships of the control tower and the airport. Three contact hours.

**AVM 2823 Approach Control (O)** 3 cr.
Prerequisites: ASC 1210, ASC 1310, ASC 1690. A study of the operation of an approach control, radar and non-radar
separation techniques, and the safe and expeditious movement of aircraft within the vicinity of the airport. Three contact hours.

**AVM 2825** Air Route Traffic Control Center (O) 3 cr.
Prerequisites: ASC 1210, ASC 1310, ASC 1690. A study of the operation of an Air Traffic Control Center, the radar and non-radar separation techniques, and the interface of towers approach controls and other centers. Three contact hours.

**AVM 2831** Radar/Computer Interface (O) 3 cr.
A history of the impact of radar on the air traffic system, the advent of the computer and an introduction to the computer/radar interface. Three contact hours.

**AVM 2941** Facility Internship (O) 4 cr.
Prerequisites: AVM 2431, AVM 2821, AVM 2823, AVM 2825. Corequisite: AVM 2831. The course includes familiarization with the air traffic system via on-site orientation, in-depth visits to flight service stations, towers, approach control en route centers, weather stations, and radar sites. Four contact hours.

**BAN – Banking**

**BAN 1100** The Banking Starter Series (O) 3 cr.
This is a series of three short orientation seminars at the entry level for new bank employees. In order to earn three credits, all three seminars must be completed. Your Place in Banking – This three-hour training unit is designed to give new employees information on the functions of the various parts of a bank and the financial services offered by the commercial bank. Your Personal Finances – This three-hour training unit is designed to show new employees the best methods of managing their personal income – how to spend it, save it, and borrow against it. Your Personal Image – This nine-to-twelve hour training unit is designed to teach new employees office courtesies, telephone etiquette, and personal grooming. Three contact hours.

**BAN 1110** Principles of Bank Operation (D) 3 cr.
This course presents the fundamentals of bank functions in a descriptive fashion so that the beginning banker may view the chosen profession in a broad (and operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective necessary for career advancement. Three contact hours.

**BAN 1160** Bank Letters and Reports (O) 3 cr.
This course is designed for those bank officers, supervisors, and employees who dictate or review correspondence. Since bank letters are actually public relations documents, all persons should be familiar not only with the mechanical forms of bank letters but also with the psychological principles that help the letter writer achieve best results. The course reviews letter forms, emphasizes fundamental principles underlying modern correspondence, and examines different kinds of bank letters. Three contact hours.

**BAN 1210** Analyzing Financial Statements (O) 3 cr.
This course is organized into two main sections: Characteristics of Financial Statements and Financial Statement Analysis. The first section serves as a useful review of basic accounting principles for those students who have studied accounting. For those who have not, this section provides the minimum accounting background necessary for profitable study of financial statement analysis. Three contact hours.

**BAN 1700** Financing Business Enterprise (O) 3 cr.
The student may benefit by taking ACG 1000 or ACG 2001 before enrolling in Ban 1700. Stress is placed on the difference between lending and investing, and on the fact that investing in a corporation and financing a corporation are different aspects of the same subject. In this course, the material is presented from the viewpoint of the corporate treasurer who must safeguard the financial future of the corporation. Three contact hours.

**BAN 2150** Bank Public Relations and Marketing (O) 3 cr.
This course discusses the basic of public relations, both internal and external, and seeks simply to explain the why, the what, and some of the how of public relations and marketing. It is intended as an overview for all bankers in terms of what everyone in banking should know about the essentials of bank public relations and marketing. Three contact hours.

**BAN 2200** Credit Administration (O) 3 cr.
This course, directed toward the executive level, concerns itself partly with a statement and a discussion of factors influencing and determining loan policy. Methods of credit investigation and analysis, credit techniques, specific credit problems and regular as well as unusual types of loans are discussed. Three contact hours.

**BAN 2303** Savings and Time Deposits (D) 3 cr.
This course reflects a knowledge of the historical development of savings institutions and an awareness of the economic function of the savings process in order to clarify important differences between financial savings by individuals or organizations and real savings that appear as capital formation. Different types of financial savings are reviewed in order to describe the system of financial flows of income to capital investment. Three contact hours.

**BAN 2720** Bank Management (O) 3 cr.
This course presents new trends which have emerged in the philosophy and practice of management. The study and application of the principles outlined provide new and experienced bankers with a working knowledge of banking management. Since case studies are becoming well established as an effective management learning technique, the text introduces the use of cases as a new element. Three contact hours.

**BCH – Biochemistry (Biophysics)**

**BCH 2010C** Bio-organic Chemistry for Allied Health Students (P) 4 cr.
Prerequisite: CHM 1040C. This course is designed for those students in the Dental Hygiene Program or those students wishing to transfer into UNF B.S.N. Program. Subject matter includes a brief survey of inorganic chemistry (atomic structure, gas laws, acids and bases, solutions), and a study of organic chemistry (alkanes, alkenes, alkyne, hydrocarbons) and biochemistry (carbohydrates, lipids, proteins, nucleic acids, metabolism). Six contact hours: three lecture hours; three laboratory hours.

**BCN – Building Construction**

**BCN 1001C** Building Construction (D) 3 cr.
Prerequisites: ETD 1100C. MAC 1104. SUR 1101C. A study of the qualitative aspects of structural design involved in the materials and types of construction used in various parts of buildings. Analysis and evaluation of work methods, equipment and specifications employed in the construction of residential, commercial and small industrial buildings. Four contact hours: two lecture hours; two laboratory hours.
BCT 2614C  Planning and Estimating (D)  3 cr.
Prerequisites: BCT 1001C, ETI 1421C. Analysis and determination of job requirements and costs of construction operations, including direct and indirect costs and preparations of bid proposals for construction projects. Four contact hours: two lecture hours; two laboratory hours.

BCT – Building Construction Trades

BCT 1001  Quantitative Methods for Building Trades (O)  3 cr.
A course designed to teach basic trade arithmetic, calculate problems dealing with area to solve basic ratio and proportion problems, and basic estimating of materials. Three contact hours.

BCT 1111  Woodworking for Building Trades (O)  3 cr.
Prerequisite: BCT 1113. This course provides an overview of the growth of wood and the way defects and blemishes occur. The course covers tools and machines necessary to the construction industry, the techniques and methods of joining wood products and a brief description of the major production areas in woodworking. Six contact hours (theory/laboratory).

BCT 1113  Blueprint Reading for Building Trades (O)  4 cr.
Prerequisite: BCT 1001. A course designed to teach the fundamentals of blueprint reading and sketching common to all trades in the construction trades. This course will cover plans, elevations, shapes, details and views in sections. The course is divided into three major parts: interpreting, sketching and practical application of blueprint reading principles. Four contact hours.

BCT 1114  Concrete Form Construction (O)  4 cr.
This course describes the construction and use of various concrete forms employed in building construction. The forms described include concrete footings, slabs, walls, columns, beams and stairs. This course enables the student to gain practical experience in making and setting forms under supervised work conditions. Eight contact hours (theory/laboratory).

BCT 1401  Introduction to Brick and Block Masonry (O)  4 cr.
A course designed to teach the principles of brick and blocklaying. Topics included are development and manufacture of block, tools and equipment mortar, essentials of bonding brick and concrete block masonry, masonry practices and details of construction, scaffolding, cleaning, masonry work, and understanding and reading construction drawing and fireplaces. Special emphasis will be placed on shop safety procedures. Eight contact hours (theory/laboratory).

BCT 1431  Wall Layout and Construction (O)  4 cr.
A course designed to teach the purposes of laying out brick bonds; to identify layout methods and types of bonds; distinguish between load bearing and non-load bearing walls; and types of tooling. Eight contact hours (theory/laboratory).

BCT 1501  Introduction to Plumbing (O)  4 cr.
This course is designed to familiarize the student with the basic principles and definitions relating to the plumbing trade, review of related math, introduction to hand and power tools, understanding of basic blueprints and familiarization with materials and fittings. Safe working practices will be stressed. Eight contact hours (theory/laboratory).

BCT 1502  Estimating Plumbing Repairs (O)  4 cr.
This course is designed to teach the student how to estimate material and labor cost to do specific plumbing jobs. Eight contact hours. (theory/labatory).

BCT 1504  Plumbing Repairs (O)  4 cr.
Prerequisite: BCT 1501. This course is designed to enable the student to locate and repair or eliminate problems related to drainage systems, fixtures, valves and water distribution systems. Systematic troubleshooting procedures and human relations (dealing with the customer) will be included. Eight contact hours (theory/laboratory).

BCT 1505  Plumbing Code (O)  4 cr.
This course is designed to familiarize the student with the City of Jacksonville plumbing code. Also discussed will be the National and Southern Plumbing code. Eight contact hours (theory/laboratory).

BCT 1523  Venting Systems (O)  4 cr.
Prerequisites: BCT 1501, BCT 2521. This course is designed to familiarize the student with the venting systems used in this area and the materials required relating to venting systems will be covered. Eight contact hours (theory/laboratory).

BCT 1525  Water Distribution System (O)  4 cr.
Prerequisite: BCT 1501. This course is designed to familiarize the student with water supply systems. Included are cold water systems, hot water systems, circulating systems, water softening systems and solar design applications. Applicable codes will be covered for each concept. Eight contact hours (theory/laboratory).

BCT 1710  Energy Efficient Construction (O)  3 cr.
This course is designed to provide an overview of energy use in buildings; the determination of heat loss/gain in buildings; specific construction techniques to control heat loss/gain passive solar designs; and active solar systems. Three contact hours.

BCT 2116  Framing Methods I (O)  4 cr.
This course is designed to teach the different kinds of wood framing methods. Special emphasis will be placed on floor, wall and ceiling framing and wall sheathing. Eight contact hours (theory/laboratory).

BCT 2117  Interior Trim and Cabinets (O)  4 cr.
Prerequisite: BCT 2125. The students will benefit by taking other trade related courses, especially wall framing and exterior trim. The students will become acquainted with insulation, interior wall and ceiling finish, finish flooring, stairs, doors, and window trim. Eight contact hours (theory/laboratory).

BCT 2118  Exterior Finish (O)  4 cr.
Prerequisite: BCT 2125. This course is designed to teach the different types of door, window and exterior finish. Special emphasis will be placed on styles of windows, doors and cabinet making plus roof trim. Eight contact hours (theory/laboratory).

BCT 2125  Framing Methods II (O)  4 cr.
This course is designed to provide the student with an in-depth study of commercial carpentry and methods of construction. The various elements of design, function and quality control of exterior and interior wall systems, floor and roof construction techniques and types of base, wall display cabinets will be examined, and then full-size or scale models will be constructed. Eight contact hours (theory/laboratory).
BCT 2405 Advanced Masonry (O) 4 cr.
This course is designed to teach laying out and constructing footings, foundations, chimneys, fireplaces, modular coordination; glazed and prefaced masonry units, arches, stone masonry, advance in masonry construction and job management practices. Eight contact hours (theory/laboratory).

BCT 2416 Masonry Specialties, Stucco and Plaster (O) 4 cr.
Prerequisites: BCT 1114 and BCT 1401. This course is designed to teach several specialized masonry techniques and to focus upon the masonry products utilized in these techniques. Topics and work areas include: casting decorative concrete; special finishes; glass blocks, ceramic tile; terrazzo; stucco; plaster; veneer plaster; stone and rock masonry; and imitation brick and stone. Eight contact hours (theory/laboratory).

BCT 2460 Chimneys and Fireplaces (O) 4 cr.
A course designed to teach identification of the types of fireplaces, parts of fireplaces, the factors to consider in constructing fireplaces, procedures, for buttering a fire brick, to distinguish between fire brick mortar and brick mortar, and to construct a firebox and fireplace. Eight contact hours (theory/laboratory).

BCT 2521 Isometrics and Layout (O) 4 cr.
Prerequisite: BCT 1501. This course is designed to enable students to make isometric projections from flat plans, calculate fixture unit loads, properly size pipe, and layout venting, and water distributions systems. Eight contact hours (theory/laboratory).

BCT 2527 Fixtures and Valves (O) 4 cr.
Prerequisite: BCT 1501. This course is designed to familiarize the students with plumbing fixtures and the proper method of their installation. Safe working habits will be stressed. Eight contact hours (theory/laboratory).

BOT – Botany

BOT 1010C Botany (P) 4 cr.
An evolutionary survey of the plant kingdom. Emphasis will be placed on principles which are applicable to all forms of plant life. Six contact hours: three class hours; three laboratory hours.

BSC – Introductory Biological Science

BSC 1011C Principles of Biology (P) 4 cr.
An introduction to biological structure, function processes, principles and concepts. Laboratory experience using plant and animal materials to reinforce the subject matter is a required part of the course. This course is designed to fulfill the general educational requirements while also fulfilling the laboratory requirement needed by many students who plan to transfer to a four-year institution. Five contact hours: three class hours; two laboratory hours.

BUL – Business Law

BUL 2111 Business Law (D) 3 cr.
The basic principles of law as related to business. Areas covered include criminal law, law of torts, contracts, employment, personal and real property, consumer protection, consumer credit, environmental law, and community planning. Three contact hours.

BUL 2112 Business Law (D) 3 cr.
Prerequisite: BUL 2111. The legal principles involving agency, commercial paper, bailments and sales are stressed. Three contact hours.

CCJ – Criminology and Criminal Justice

CCJ 1010 Introduction to Criminology (D) 3 cr.
The course provides a survey of deviant behavior as related to the concept and definition of crime, concept and purposes of the law, measurement of crime, causes of crime, and societal reactions to criminal behavior, from historical through contemporary periods. Three contact hours.

CCJ 1020 Introduction to Criminal Justice (D) 3 cr.
Introduction to the philosophical and historical backgrounds of law enforcement. Organization, purpose and functions of law enforcement and other agencies involved in the administration of criminal justice in the United States. Career orientation. Three contact hours.

CCJ 1030 Introduction to Criminal Behavior (D) 3 cr.
A basic study of the nature and peculiarities of human behavior in direct relationship to crime and delinquency. Three contact hours.

CCJ 1220 Criminal Law (D) 3 cr.
Study of the scope, purposes and principles of criminal law, the classification and analysis of crimes and criminal acts in general, and the examination of selected specific offenses. Three contact hours.

CCJ 1300 Introduction to Corrections (D) 3 cr.
An examination of the total correctional process from law enforcement through the administration of justice, probation, prisons and correctional institutions, and parole. Career orientation. Three contact hours.

CCJ 1400 Police Organization and Administration (D) 3 cr.
Principles of organization and administration in law enforcement; functions and activities; planning and research; public relations; personnel and training; inspection and control; records and communications, custody, etc. Three contact hours.

CCJ 1420 Police Operations (D) 3 cr.
Principles of organization and administration as applied to operations units. Includes patrol functions, traffic administration, criminal investigation, intelligence and vice units, juvenile units, and coordination and consolidation of police services, etc. Three contact hours.

CCJ 2230 Criminal Evidence and Procedure (D) 3 cr.
Study and examination of the criminal rules of evidence: kinds, degrees, admissibility, competence and weight, specifically as they affect the law enforcement officer in the processes of arrest, force, search, seizure, preservation, custody, testimony and courtroom procedures. Three contact hours.

CCJ 2250 Constitutional Law (D) 3 cr.
The study of the United States and Florida Constitutions. An in-depth analysis of those constitutional amendments having a bearing on contemporary legal issues and case law interpreting those constitutional amendments. Three contact hours.

CCJ 2330 Probation, Pardons and Parole (D) 3 cr.
Probation as a judicial process and parole as an executive function are examined as community-based correctional programs and the use of pardons is reviewed. Three contact hours.
CCJ 2340 Introduction to Correctional Treatment (D) 3 cr.
The basic principles of human behavior and some of the techniques of changing attitude and behavior are evaluated, and the individual and group approaches to counseling are reviewed. Three contact hours.

CCJ 2360 Introduction to Contemporary Practices in Corrections (D) 3 cr.
Modern trends in corrections, such as the community-based programs in work-release, halfway houses, contact program planning, as well as the therapeutic community and treatment concept in institutions are described and evaluated. Three contact hours.

CCJ 2500 Juvenile Delinquency (D) 3 cr.
Study of the major issues of crime causation, rehabilitation, and juvenile delinquency participation among the lower, middle, and upper social classes. The process of handling juvenile delinquents from confrontation with authorities, to detention, to release and aftercare is covered. Three contact hours.

CCJ 2930 Seminar in Police Problems (D) 3 cr.
This course is designed to allow the student to pursue an individually selected critical issue in our contemporary law enforcement system. A thorough in-depth analysis of the issue is undertaken so that ideas for improvement in this area of the law enforcement system are shared and critiqued in class. Three contact hours.

CCJ 2933 Introduction to Special Problems in Corrections (D) 3 cr.
Research writing and discussion of selected subject areas related to corrections, such as correctional planning for short term offenders and misdemeanants, handling of "unusual" prisoners, classification of offenders, authority and responsibility of correctional officers, professional and legal standards, and analysis of contemporary correctional problems. Three contact hours.

CDA – Computer Design/Architecture

CDA 2172 Computer Aided Drafting and Design (D) 3 cr.
Prerequisites: ARC 2120C, COC 2001, SUR 2140C. This course is intended for a student to have a general understanding of Computer Aided Drafting and Design operations. The student will have a working knowledge of steps required for initializing commands to the CAD system using the keyboard and the stylus. The student will create drawings using various menus and command the system to create a fast plot of any current active drawing in the system. Six contact hours: two lecture hours; four laboratory hours.

CHD – Child Development

CHD 1110 Infant and Toddler Care I (Development) (D) 3 cr.
This course acquaints infant and toddler care workers in public, private, and church-sponsored child care centers with the stages of human development from birth to three years. The impact of health, parenting, environment, nutrition, mental health and self-esteem on normal and abnormal development are studied. Three contact hours.

CHD 1220 Child Growth and Development I (D) 3 cr.
This course is an introductory study of the physical, social, emotional, and intellectual development of the young child. Guidance, behavior problems, feelings, attitudes, and values are discussed. Three contact hours.

CHD 1230 Child Growth and Development II (D) 3 cr.
Prerequisite: CHD 1220. This course is designed to further the student’s understanding of the physical, social, emotional, and intellectual development of the young child. Special children (handicapped, minorities, behavior problems, children in crisis), nutrition and development, and safety and emergency procedures are also studied. Three contact hours.

CHD 1850 Training of Residential Child Care Workers I (D) 3 cr.
This course is for residential child care workers or foster parents and for those who are preparing for those professions. Course I deals with understanding developmental planning, developmental needs, and separation. Three contact hours.

CHD 1851 Training of Residential Child Care Workers II (D) 3 cr.
This course is also for residential child care workers or foster parents and for those who are preparing for those professions. Course II deals with the understanding of cottage life, discipline, the group, and the job. Three contact hours.

CHD 2120 Infant and Toddler Care II (Education) (D) 3 cr.
Prerequisite: CHD 1110. This course acquaints infant and toddler care workers in public, private, and church-sponsored child care centers with educational strategies for children from birth to three years. Minimum standards, classroom management, teacher preparation, assessment, discipline, and parent participation are studied. Three contact hours.

CHM – Chemistry

CHM 1020 Chemistry for Liberal Arts (P) 3 cr.
The student will benefit by taking high school algebra or MAT 0024 prior to enrolling in this course. This course is designed to meet the general education requirement for the non-science major. It is designed especially for the student who wishes to gain an understanding of the fundamental nature of physical science from the chemical point of view. The treatment utilizes an approach to scientific concepts and methods, stressing and illustrating principles rather than merely listing phenomena. Three contact hours.

CHM 1040C Introductory Chemistry I (P) 4 cr.
The student will benefit by taking high school algebra or MAT 0024 prior to enrolling in this course. Introduction to the principles of modern inorganic chemistry, including topics in structure of matter, gas laws, solutions, ionization, chemical equations, atomic theory, acids and bases, metals and non-metals. This course is designed for those students who have had no previous chemistry, and for those planning to major in physical education, health related fields, medical technology, and home economics. Six contact hours: three lecture hours; one three-hour laboratory.

CHM 1041C Introductory Chemistry II (P) 4 cr.
Prerequisite: CHM 1040C. This course is a continuation of CHM 1040C with an introduction to organic chemistry. Six contact hours: three class hours; one three-hour laboratory.

CHM 1045C General Chemistry and Qualitative Analysis I (P) 4 cr.
Prerequisite: One year of high school chemistry and two years of high school algebra or grade of C or better in CHM 1041C. This course is designed to introduce the student to modern chemical concepts. Subject matter includes modern
atomic structure and periodicity, chemical bonding, states of matter, gas laws and solutions. The laboratory work will be quantitative in nature, stressing accurate laboratory techniques. This course is designed to meet the first year college requirements for those majoring in science, engineering, premedicine and pharmacy. Six contact hours: three lecture hours; one three-hour laboratory.

CHM 1046C General Chemistry and Qualitative Analysis II (P) 4 cr.
Prerequisite: Grade of C or better in CHM 1045C. This course is a continuation of CHM 1045C and will stress chemical equilibrium, chemical kinetics, electrochemistry, oxidation-reduction, and selected families of metals and non-metals. Laboratory work will include studies of ionic equilibrium in aqueous solutions and semi-micro qualitative analysis. Six contact hours: three lecture hours; one three-hour laboratory.

CIS – Computer and Information Systems

CIS 2100 Data Management and Utility Programs (D) 3 cr.
Prerequisite: CIS 2301. A study of the organizations, access methods, job control statements, and the use of utility programs as components of an application system. Students will be required to build and maintain files. Topic will include an introduction to data bases and data base management systems. Four contact hours: three lecture hours; one laboratory hour.

CIS 2301 Information Systems (O) 3 cr.
Prerequisite: COC 1300. This course is designed to introduce the student to the fundamental concepts of information systems. Emphasis will be on current systems documentation techniques through the use of both classical and structured tools/techniques for describing process flows, data flows, data structures, file design, input and output designs, and program specifications. Examples of applications and various types of processing systems including batch, on-line, and distributed systems are covered along with an overview of the system development life cycle of an information system. Four contact hours: three lecture hours; one laboratory hour.

CJD – Criminal Justice Development

CJD 2310 Police Supervision (D) 3 cr.
An introductory course designed to acquaint future and present police supervisors with an understanding of the various functions of supervision. The supervisor's responsibilities and assignments are examined. The general topical areas covered will be: techniques of working with people, communications, personnel selection and training, motivation, principles of organization and management, discipline, and performance ratings. Three contact hours.

CJT – Criminal Justice Technology

CJT 2100 Criminal Investigation (D) 3 cr.
Fundamental course of the most important phases of criminal investigation. Branches of crime detection dealt with are methods of investigation, note taking, report writing, handling the crime scene, interrogations, admissions and confessions, missing persons, undercover assignments and such specific offenses as arson, narcotics, larceny, burglary, robbery, and forgery. Three contact hours.

CJT 2110 Introduction to Criminalistics (D) 3 cr.
Basic course of general investigation and special criminalistic matters, including such topics as homicide, rules of evidence, testimony in court, observation and description, hairs and fibers, invisible radiation, documentary evidence, arrests, searches of persons and raids. Three contact hours.

CNM – Computational/Numerical Methods

CNM 1005 Data Processing Mathematics (D) 3 cr.
Prerequisite: COC 1300, MAT 1003 or satisfactory score on the mathematics placement test. This is an essential course of data processing majors. Topics include: Binary, octal, and hexadecimal numbers; fixed point storage; computer codes; packed decimal arithmetic; the real number system; approximations; accuracy and precision; scientific notation; floating point notation and storage; and logical forms and operations. Computer laboratory exercises will be utilized to demonstrate various topics and techniques presented in the classroom. Four contact hours: three lecture hours; one laboratory hour.

COA – Consumer Affairs

COA 1100 Consumer Decisions (D) 3 cr.
A study of practical money management applied to the family with emphasis on expenditures for food, clothing, housing, transportation, and health care. The course includes a study of credit retirement protection, taxes, consumer protection, and the consumer movement. Three contact hours.

COC – Computer Concepts

COC 1300 Introductory Computer Concepts (D) 3 cr.
This course is intended for students with no previous experience in data processing. It introduces the student to the field of data processing and includes a brief history of the development of computers, a review of pertinent number systems, a study of the basic components of the computer and how they work in the system, elementary problem solving, a look at the "cast of characters" in data processing, and a discussion of advanced computer systems. Four contact hours: three lecture hours; one laboratory hour.

COC 2001 Computer Concepts (D) 3 cr.
An introduction to the computer. This course is intended for students with no previous training in computers or programming, historical development, overview of computer input/output devices, processing techniques, introduction to programming languages and engineering/industrial applications. Three contact hours.

COP – Computer Programming

COP 1000 Introduction to Programming and Algorithm Design (D) 3 cr.
Corequisite: COC 1300. This is an essential first course for data processing majors. It will introduce the fundamentals of computer usage, covering topics such as editor functions, file system use, and program compilation and execution. Students will be taught algorithm design using structured flowcharting and pseudocoding techniques. The programming language Pascal will be introduced and used throughout the course to supplement the theoretical foundations that are being built. Four contact hours: three lecture hours; one laboratory hour.

COP 1160 RPG Programming (D) 3 cr.
RPG (Report Program Generator) is a problem oriented programming language designed essentially to obtain data from single or multiple rules, perform calculations and table lookup as required and write reports and/or update
files. Students will solve elementary to moderately complex business problems by (a) writing RPG programs, (b) submitting programs for compilation and running on the College's computer system, and (c) thoroughly debugging programs until the output is perfect. Four contact hours; three lecture hours; one laboratory hour.

**COP 2110**  
**FORTRAN Programming (D)** 3 cr.  
Prerequisites: COC 1300 and one of the following: MTB 1321, CNM 1005, MAT 1033. A comprehensive study of a scientific programming language which is also used in business applications in batch-job processing environments. Emphasis will be placed on file manipulation, including disk, files, and efficient programming techniques, interactive programming and simulation. Lab problems will include business, engineering, and scientific applications. Four contact hours: three lecture hours; one laboratory hour.

**COP 2120**  
**Basic COBOL Programming (D)** 3 cr.  
Prerequisite: COC 1300 or equivalent experience. COBOL (Common Business Oriented Language) is the programming language specifically designed to solve business problems. Students will solve elementary to moderately complex business problems by (a) writing COBOL programs, (b) submitting programs for compilation and running on the College's computer system, and (c) thoroughly debugging programs until the output is perfect. Four contact hours: three lecture hours; one laboratory hour.

**COP 2121**  
**Advanced COBOL Programming (D)** 3 cr.  
Prerequisite: COP 2120 or equivalent experience. COBOL (Common Business Oriented Language) is the programming language designed to solve business problems. Students will solve moderately complex business problems by (a) writing COBOL programs, (b) submitting programs for compilation and running on the College's computer system, and (c) thoroughly debugging programs until the output is perfect. Four contact hours: three lecture hours; one laboratory hour.

**COP 2130**  
**PL/I Programming (D)** 3 cr.  
Prerequisites: COP 1400 and COP 2120. This course will include the study and application of PL/I as applied to business operations. Included within the curriculum will be six weeks of application programming where the student will write and run programs on the College computer system. Four contact hours: three lecture hours; one laboratory hour.

**COP 2170**  
**Programming in BASIC (D)** 3 cr.  
Prerequisites: COC 1300 or COC 2001 and one of the following: MTB 1321, CNM 1005, MAT 1033. A beginning level computer programming course using a popular general purpose language in an interactive or time-sharing environment. The primary machine will be the Prime 400 minicomputer system with the central computer in the FJC Data Center used as backup in a remote, batch processed environment. Students will solve problems involving business applications, engineering computations, mathematical games and simulation. Four contact hours: three lecture hours; one laboratory hour.

**COP 2400**  
**Basic Assembly Language Programming (D)** 3 cr.  
Prerequisites: COC 1300 and CNM 1005. This course introduces basic concepts in computer programming using a low-level, machine-oriented language. It may also be referred to as BAL 360-370 Programming, Introductory ALC, or Beginning ALC. Students will analyze business problems involving sequential files (cards, magnetic disks and tapes, and printed reports); develop logic flowcharts; translate flowcharts into IBM System/360-370 DOS Assembler Language codes; incorporate job control statements to form a program deck; and test, debug, and document their computer solutions to business problems. Four contact hours: three lecture hours; one laboratory hour.

**COP 2610**  
**Advanced Computing and Programming Systems (D)** 3 cr.  
Prerequisite: COP 2120 and proficiency in computer programming. This course will include the study of computer architectures, operating systems, language translators, and data communication/teleprocessing. Lectures, discussions, demonstrations, and lab problems will be based primarily on the software currently implemented on the ECP-18, Prime 400, and the central computer system at Florida Junior College. Four contact hours: three lecture hours; one laboratory hour.

**CPO – Comparative Politics**

**CPO 2002**  
**Introduction to Comparative Government (P)** 3 cr.  
An introductory study of political systems of various countries, showing institutions and stressing some economic characteristics of particular systems compared with institutions and economic systems in other countries. This comparison will be related to specific countries. Three contact hours.

**CRM – Computer Resources/Management**

**CRM 1039**  
**Data Processing Workshop (D)** 3 cr.  
Prerequisite: CIS 2301. This course provides the opportunity for students to gain actual work experience within operational data processing centers. Primary emphasis will be placed on the operation of equipment in the Florida Junior College at Jacksonville Data Center and the Data Processing Lab., including the Prime 300 computer system. Efforts will be made to familiarize students with the operation of computer systems and special peripheral devices in other data processing shops. Eight contact hours: six lecture hours; two laboratory hours.

**CRW – Creative Writing**

**CRW 2000**  
**Imaginative Writing (P)** 3 cr.  
Prerequisite: ENC 1102. A course to develop the student's capacity for imaginative writing in prose and/or poetry. Critical discussion of student's work of selected literary techniques. Individual conferences. Three contact hours.

**CTE – Clothing and Textiles**

**CTE 1310C**  
**Basic Clothing Construction (D)** 3 cr.  
This course includes the selection and use of commercial patterns; simple alterations; selection, use, and care of modern sewing and pressing equipment; planning and construction of garments, and developing basic construction skills. The selection of suitable accessories will also be included. Four contact hours: two lecture hours; two laboratory hours.

**CTE 1340C**  
**Advanced Clothing Construction (D)** 3 cr.  
Prerequisite: CTE 1310C. This course presents to the participant the problems encountered in fitted garments construction. Skill in figure analysis, pattern alterations, and advanced clothing construction techniques will be exhibited by the student. Four contact hours: two lecture hours; two laboratory hours.
CTE 1350C Tailoring I (D) 3 cr.
Prerequisite: CTE 1310C or the equivalent. This course is designed for the student who is interested in creating individual fashions which meet the student’s special preferences and requirements. Emphasizes an individualized approach to custom design, fit, advanced construction, and tailoring techniques. Four contact hours: two lecture hours; two laboratory hours.

CTE 1401C Basic Textiles (D) 3 cr.
A study of fabrics used for clothing and house furnishings with emphasis on fibers, yarns, constructions, designs, and finishes that determine qualities and the performance of a fabric. Use and care of fabrics and cost factors will be included. Four contact hours: two lecture hours; two laboratory hours.

CTE 1402C Household Textiles (D) 3 cr.
Prerequisite: CTE 1401C. A study of recent developments in textiles for apparel and home furnishings with emphasis on man-made fibers, new construction techniques, finishes, and care. End use performance standards and legislation will also be included. Four contact hours: two lecture hours; two laboratory hours.

CTE 1812 Introduction to Fashion Merchandising (O) 3 cr.
An introduction to the clothing and textiles industry which includes the exploration of career opportunities, consumer behaviors, the historical development of fashion, the environmental influences on fashion demand, and the marketers of fashion. Three contact hours.

CTE 1825 Merchandising Mathematics and Buying Products (O) 3 cr.
Prerequisite: CTE 1812. An in-depth study of retail operation which includes an analysis of store organization, buying functions and techniques, and sales promotion as related to the clothing and textiles industry. Three contact hours.

CTE 1840 Fashion Merchandising Product Information (O) 3 cr.
Prerequisite: CTE 1401C. This course provides the student with the opportunity to acquire skill in analyzing fashion apparel and accessories for men, women, and children. Emphasis will be on the quality of materials, construction, and design of merchandise in all price ranges. Students will also analyze selling methods for communicating this knowledge effectively to the consumer. Fashion vocabulary will be developed and consumer demands and trends will be considered. Three contact hours.

CTE 2283 Fashion Merchandising Computer Applications (O) 3 cr.
Prerequisite: CTE 1825. This course is an examination of the advantages and techniques of computer use in retailing. Emphasis will be placed on the applications of computer generated information. A study of merchandising law and the impact of legislation on retailing activities will also be included. Three contact hours.

CTE 2851 Fashion Sales Promotion (O) 3 cr.
This course is designed to study the methods most commonly used by fashion merchants for promoting sales. Instruction will include an evaluation of the effectiveness of the various types of advertising, visual merchandising, fashion show, and personal selling according to individual retail needs. Three contact hours.

CTE 2880 Fashion Merchandising Internship (O) 8 cr.
Prerequisite: Completion of all other program requirements. This course is a supervised on-the-job training program. Students will be required to work a minimum of 400 total hours for a minimum of 12 weeks in an approved retail business. This cooperative education experience will provide students the opportunity to practically apply knowledge gained in the prerequisite courses. On-site visitations will be made by the instructor to monitor student progress and performance. Additionally, each student will attend a two-hour on-campus seminar every other week conducted by the classroom instructor. Thirty-three contact hours: one lecture/discussion; thirty-two on-the-job experience.

CTE 2892 Fashion Merchandising Management Seminar (O) 3 cr.
Prerequisites: Must be a second-year student and have completed CTE 1350C, CTE 1401C, CTE 1812, CTE 1825, CTE 1840. This course is a study of management practices and techniques in the fashion retailing industry. Emphasis will be placed on recruitment and selection of qualified personnel, training, and supervisory techniques. Three contact hours.

DAA – Dance Activities

DAA 1000 Recreational Dance (P) 1 cr.
The introduction and practice of the basic dance skills for enjoyment and recreation. Course content includes round, folk, square, social and current “teen-age” dancing. Two contact hours (activity).

DAA 1340 Folk Dance (P) 1 cr.
Exploration and enjoyment of the fundamental steps, positions, and formations of the popular American and ethnic folk and round dances. Two contact hours (activity).

DEA – Dental Assisting

DEA 1000 History and Jurisprudence of Dentistry (O) 1 cr.
This course presents a knowledge of the Code of Ethics for dental assistants and the laws which govern the practice of dentistry. Previous dental experience is required before taking this course. One contact hour.

DEA 1120 Science for Dental Assistants (O) 3 cr.
This course will be preceded by Anatomy and Physiology. Includes Oral Pathology – A knowledge of etiology dental caries control. A familiarity with common periodontal diseases. Pharmacology – A knowledge of the drugs commonly used in the dental treatment and the responsibilities in the use of such drugs; a knowledge of the standards set forth by the Food and Drug Administration of the Department of Health, Education and Welfare. First Aid – knowledge of and ability to administer first aid treatment or combat emergency situations which may occur. Three contact hours.

DEA 1820C Dental Assisting Expanded Duties (O) 2 cr.
This course is designed to teach the dental assistant student expanded duties as permissible by the Florida State Dental Practice Act. New procedures will be included as traditional expanded functions are ratified by the Department of Professional Regulations, Board of Dentistry (Chapter 21G-16). Manipulation of Dental Materials utilizing dental assisting techniques will be included. Three contact hours: one lecture hour; two laboratory hours.

DEA 2200 Office Management (O) 3 cr.
This course is designed to develop the student’s ability to receive and dismiss patients; understand the behavior patterns of people, including parental attitudes; make appointments and maintain appointment books; communicate by telephone with patients and salesmen; respond to emergencies and patients with a grievance; keep financial records; maintain an efficient recall and patient record file; keep books and records for tax purposes; do banking; write business letters; and purchase and maintain supplies. Three contact hours.
DEA 2800C Clinical Practice I (O) 5 cr.
This course is designed to give the dental assisting student: a knowledge of chairside assisting, equipment and its installations; basic maintenance and care of equipment; a knowledge of names, design, use of, and the understanding of sterilizing agents for the proper care and maintenance of all instruments commonly employed in a dental office; the ability to select and prepare properly all instruments for operative, prosthetic, endodontic, orthodontic, and surgical procedures in accordance with instructions from the dentist; the ability to recognize promptly the operative needs of the dentist; and ability to properly maintain a clear operating field. Eight contact hours: two lecture hours; six laboratory hours.

DEA 2801C Clinical Practice II (O) 6 cr.
This course consists of two hours of lecture, four hours of laboratory and eight hours of field experiences covering clinical and chairside dental assisting skills. Fourteen contact hours: two lecture hours; four laboratory hours; eight field hours.

DEA 2802C Clinical Practice III (O) 3 cr.
This course consists of twelve hours a week of field experience in the dental specialties such as orthodontics, endodontics, and oral surgery. Twelve contact hours (field).

DEA 2850C Clinical Practice IV (O) 5 cr.
This course consists of twenty hours a week of clinical practice in the dental office in the field. This course encompasses all the functions performed by a dental assistant under the supervision of a dentist. Twenty contact hours (field).

DEH – Dental Hygiene

DEH 1003C Principles of Dental Hygiene (O) 5 cr.
Principles of Dental Hygiene is a basic introductory course to teach the theories and practices in dental hygiene, and a prerequisite to Clinical Dental Hygiene I. As such, it is offered during the student's first term of the first year of clinical studies. Through lectures, demonstrations, laboratory and clinical experiences, and task assignments, the student gains knowledge and comprehension of dental hygiene services, and a proficiency in coordination in technical skills necessary to prepare the student to begin preventive periodontic patient services the following semester. Eight contact hours: two lecture hours; six laboratory hours.

DEH 1700 Dental Health Education (O) 3 cr.
This course incorporates the principles, practices, methods, and visual aids used in teaching dental health education to the public who may be in a dental office, school, public health institution, club, or industry. It is a study of teaching concepts and practices of preventive dentistry. Practical experience is gained through teaching dental health education in elementary and secondary schools in the community during the entire National Children's Dental Health Week. Three contact hours.

DEH 1800C Clinical Dental Hygiene I (O) 6 cr.
This course is a continuation of the Principles of Dental Hygiene. It is a didactic and clinical course comprised of lectures, laboratory exercises, and actual clinical experience on patients. The purpose of this course is to provide the students with clinical hygiene practice for continuing refinement of technical skills and an opportunity to gain extensive experience in the areas of dental hygiene education. CPR will also be included in this course. Ten contact hours: two lecture hours; eight clinical hours.

DEH 1802L Clinical Dental Hygiene II (O) 8 cr.
This course is a continuation of the practical application of the competencies and skills acquired in Principles of Dental Hygiene, DEH 1003C, and Clinical Dental Hygiene I, DEH 1800C. The time is devoted to providing oral prophylaxis care for patients who present varying classifications of prophylaxis needs. Emphasis is on continuing refinement of the techniques and skills in performing an oral prophylaxis, including Gracey curettes in root planing, periodontal and dental charting, radiographic techniques and interpretations, dietary analysis, and efficiency and care in the management of patients, including those with special needs. Sixteen contact hours (clinic).

DEH 2507C Dental Hygienists Expanded Duties (O) 2 cr.
This course is designed to teach the dental hygiene students expanded functions as permissible by the Florida State Dental Practice Act. New procedures will be included as traditional expanded functions are ratified by the Department of Professional Regulation, Board of Dentistry (Chapter 21G-16). Manipulation of Dental Materials utilizing dental hygiene techniques will be included. Three contact hours: one lecture hour; two laboratory hours.

DEH 2902 Periodontics (O) 2 cr.
This course is designed to give the student a detailed study of the factors involved in periodontal pathology and its etiology. The anatomy, physiology, and histology of the periodontium is reviewed in detail. Diagnosis, prognosis and treatment of patients with periodontal involvement, and management of patients returning for maintenance care is emphasized. Procedures and techniques for soft tissue curettage, periodontal dressing placement and removal, and suture removal are also taught. Two contact hours.

DEH 2702C Community Dental Health (O) 2 cr.
This course is a comprehensive study of oral health problems of groups of people in the community. The student is introduced to groups, assemble resources, deliver health material, survey and resurvey, and prepare statistical analysis on the groups. The student receives concentrated field experience in public health centers, Title I schools, hospitals and nursing homes, and centers for the handicapped. Four contact hours: one lecture hour; three field hours.

DEH 2904 L Clinical Dental Hygiene III (O) 8 cr.
This course is a continuation of DEH 1802L. Emphasis is on continuing refinement and increased efficiency of clinical skills including complete prophylaxis procedures, radiographs, tact and management of patients, individual responsibilities, achievement in responsibility toward the community, the profession, and dentistry in general. The student is expected to achieve an advanced level degree of proficiency. Sixteen contact hours (clinic).

DEH 2906L Clinical Dental Hygiene IV (O) 8 cr.
This course is a continuation in refinement of practical application of the competencies and the proficiencies in skills learned in all the past clinical didactic courses. Emphasis is on speed and quality improvement, and upon exposure to community dentistry participating in offices of general dentists, dental specialties, and hospital dentistry. The student is expected to achieve an exit level degree of proficiency. Sixteen contact hours (clinic).

DEH 2930 Dental Hygiene Seminar I (O) 2 cr.
This course is designed to provide a more comprehensive content coverage in all specialties of dentistry, and to enable the dental hygiene student to become more cognizant of techniques and procedures in dentistry outside the perimeters of dental hygiene. Discussions are designed to assist the dental hygiene student to understand and appreciate the several aspects of dentistry to which dental hygiene services are closely allied. Two contact hours.
DEH 2931 Dental Hygiene Seminar II (O) 2 cr.
This course is designed to provide a study of professional ethics and commitments, professional organizations, state dental practice acts, and practical consideration of methods and problems associated with operating and maintaining a dental practice. Emphasis is placed on the dental hygiene student's role as a professional person in the community, in private practice, and as an integral part of the dental auxiliary team. Two contact hours.

DEP – Developmental Psychology

DEP 2004 Human Growth and Development (P) 3 cr.
A study of the development of the individual throughout the life cycle, including child, adolescent and adult patterns of behavior. Attention is given to physical, intellectual, cognitive, personality, and social development. Three contact hours.

DEP 2102 Child Psychology (P) 3 cr.
Prerequisite: PSY 1012. A developmental study is made of the normal child, from birth to the adolescent years. Practical applications are stressed with their implications for the parent and teacher, as well as for the evolving individual. Three contact hours.

DEP 2302 Adolescent Psychology (P) 3 cr.
Prerequisite: PSY 1012. Development in the adolescent years with emphasis on psychological problems. Three contact hours.

DEP 2401 Adult Psychology (P) 3 cr.
An examination of the physical, social, intellectual and personal characteristics of the human being during early, middle and late adulthood. Key events in adult life, such as marriage, choice of occupation, parenthood, and retirement will be investigated, along with other developmental tasks and stages. Three contact hours.

DES – Dental Support

DES 1000C Oral Anatomy (O) 3 cr.
This course is a comprehensive study of macroscopic anatomy of the primary and permanent dentitions. Students learn the anatomy of the individual teeth and their investing structures, and the human dentition in biological concept. Lectures on the science of occlusion, and on the anatomy and physiology of head and neck structures are also included. Four contact hours; two lecture hours; two laboratory hours.

DES 1002C Oral Anatomy and Development (O) 2 cr.
This course covers the nomenclature and anatomy of the human dentition and all supporting structures, plus a detailed microscopic study of the deciduous and permanent teeth, and the surrounding area. Three contact hours: one lecture hour; two laboratory hours.

DES 1110C Dental Materials and Laboratory (O) 3 cr.
This course is a series of lecture-demonstrations designed to acquaint the dental assistant/dental hygiene students with the nomenclature, proper manipulation, and application of the materials used in the laboratory and clinical practice of dentistry. The procedures for purchasing and storage of supplies will be considered. Four contact hours: two lecture hours; two laboratory hours.

DES 1220C Dental Radiology (Dental Assisting/Dental Hygiene) (O) 3 cr.
This course is designed to teach the proper use of dental x-ray equipment, including radiation safety, in the taking, processing, and mounting of dental radiographs, both intra-oral and extra-oral. It includes evaluation techniques, identifying landmarks and deviations from the normal, and the filing of dental radiographs. Four contact hours: two lecture hours; two laboratory hours.

DES 2030 Oral Histology and Embryology (O) 3 cr.
A detailed microscopic study of normal human embryology and histology of facial and oral structures is presented. Laboratory work is coordinated with the lectures, utilizing histological slides. Four contact hours: two lecture hours; two laboratory hours.

DES 2042 Oral Pathology (O) 2 cr.
This course is designed to give the student a detailed understanding and knowledge of the causes and mechanisms of oral disease, oral trauma and oral developmental anomalies. It relates this knowledge to the systematic physiology of the body. Two contact hours.

DES 2050 Pharmacology (O) 2 cr.
This course is designed to give the student a detailed study of the principles, characteristics, actions, reactions, and uses of anesthetics, drugs, medications, and preparations used to prevent, control and treat diseases. Two contact hours.

DIE – Dietetic

DIE 1100 Dietetic Seminar (O) 1 cr.
This course includes a study of the role of dietetic personnel in health care food systems. Assigned problems in organization and management of dietary departments are included. Trends in methods of food service in health care facilities are studied. One contact hour.

DIE 1201 Therapeutic Nutrition (D) 3 cr.
The student will acquire knowledge and skills in applying the principles of dietary modifications for specific physiological disorders. The course is closely related to the practices of local hospitals and extended care facilities. Three contact hours.

ECO – Economics

ECO 2000 Foundations of the American Economy (P) 3 cr.
A survey of the American economic system and its development. The course is designed to guide the student in a practical examination of the contemporary operation of regulated capitalism in the United States. Consideration is given to business organizations, the market system, gross national product, banking and finance, problems in employment, and various other aspects of the government's relation to the national economy. Three contact hours.

ECO 2013 Principles of Economics I (P) 3 cr.
Macroeconomics. The foundations of economic analysis; theory of economic growth and stabilization; monetary theory; international trade and economic development. Three contact hours.

ECO 2023 Principles of Economics II (P) 3 cr.
Prerequisite: ECO 2013 or consent of professor. Microeconomics. This course includes a study of the tools for eco-
Economic analysis, the market system price theory, theory of the firm, and theories of production and distribution. Three contact hours.

**ECP – Economic Problems and Policies**

**ECP 1610 Understanding Community Economic Development (P) 3 cr.**
The course will acquaint students with the background and process of community economic development. Emphasis will be given to such urban economic concepts as tax increment financing, tax abatement, central place theory, MSDA, Economics of Agglomerations, infrastructure, 7-fold function. The purpose of the course is to acquaint students with the range of problems facing the city today (inner city decay, low-rent housing, pollution, attracting industry, transportation, jobs) and to explore various solutions to the problems. The course is intended for non-Economics majors. Three contact hours.

**EDF – Education Foundations**

**EDF 1005 Introduction to Education (P) 3 cr.**
An introductory course in education designed to assist the student in understanding the American educational system in terms of its development and the present organization. The student is acquainted with the problems and the rewards of the profession. Three contact hours.

**EDG – Education General**

**EDG 2940 Observing and Recording Child Behavior (D) 6 cr.**
Prerequisites: CHD 1220 and EEC 1001. This course is designed to increase the student's objectivity and proficiency in observing and interpreting children's behavior in addition to participating in supervised experiences with the children in the laboratory. Lecture, observation, and participation facilities are provided for the study of young children. Ten contact hours: two lecture hours; eight laboratory hours.

**EDG 2941 Supervised Student Participation (D) 6 cr.**
Prerequisites: CHD 1230, EDG 2940, EEC 1201 and EEC 1202. This course is designed for participation, under qualified supervision, in the Child Care Laboratory. Ten contact hours: two lecture hours; eight laboratory hours.

**EDP – Educational Psychology**

**EDP 2002 Educational Psychology (P) 3 cr.**
Prerequisite: PSY 1012. An in-depth study of the relationships between sound psychology and educational process which will lend to the establishment of proper teaching techniques and understanding of personality dynamics of students. Three contact hours.

**EEC – Education: Early Childhood**

**EEC 1001 Introduction to Early Childhood Education (D) 3 cr.**
This course is an introduction intended to acquaint the student with basic principles involved in guiding the young child. History of the field of early childhood, objectives of early childhood programs, parent and community involvement, minimum licensing standards, and job opportunities are also included. Three contact hours.

**EEC 1201 Overview of Early Childhood Curriculum I (D) 3 cr.**
Prerequisite: EEC 1001. This course is designed to acquaint the student with resources and basic principles involved in guiding the young child in the areas of music, Art, Language Arts, and Social Studies. Language Development and lesson planning as related to the above curriculum areas are included. Three contact hours.

**EEC 1202 Overview of Early Childhood Curriculum II (D) 3 cr.**
Prerequisite: EEC 1001. This course is designed to acquaint the student with resources and basic principles involved in guiding the young child in the areas of Mathematics, Science, and Movement Education. Language development and lesson planning as related to the above curriculum areas are included. Three contact hours.

**EER – Electrical/Electronics Repair**

**EER 1004 Blueprint and Schematic Reading (O) 3 cr.**
Blueprint and Schematic Reading is a survey course of the principles and practices involved in reading and interpreting electrical blueprints and schematics. Four contact hours: two lecture hours; two laboratory hours.

**EER 1030 Safety in the Electrical Trades (O) 3 cr.**
A course covering general safety and fire fighting, electrical safety and fire fighting, first aid for the electrical shock victim, CPR, and an introduction to OSHA. Three contact hours.

**EER 1067 Mechanical Devices for Electricians (O) 3 cr.**
This course is designed to teach the basic laws, principles, and operation of mechanical devices. A study of force, work, power, simple machines, friction, gear trains and drives will be explained in both classroom and laboratory conditions. Four contact hours: two lecture hours; two laboratory hours.

**EER 1100 Electrical Theory I (O) 3 cr.**
A course covering the fundamental concepts of electricity, batteries, DC series, parallel and complex circuits, electrical conductors, electromagnetism and magnetic circuits, and DC electrical indicating instruments. Four contact hours: three lecture hours; one laboratory hour.

**EER 1210 Electrical Theory II (O) 3 cr.**
Prerequisite: EER 1100. A course covering an introduction to alternating current, inductance, capacitance, inductive and capacitive reactance, fundamental AC circuitry, and single phase transformers. Four contact hours: three lecture hours; one laboratory hour.

**EER 1211 Introduction to Circuit Analysis (O) 3 cr.**
Prerequisite: EER 1210, or with the professor's consent. This course is a lecture/laboratory exercise in the design and application of L-C-R circuits including motors, generators, and transformers. Six contact hours (laboratory).

**EER 1291 Semiconductor Devices (O) 4 cr.**
Prerequisite: EER 1210. This course includes the theory and design of vacuum tubes and semiconductors. The various configurations, biasing methods, and basic applications will be explained in both class and laboratory conditions. Six contact hours: two lecture hours; four laboratory hours.

**EER 2068 Mechanical Skills for Electricians (O) 3 cr.**
This course is designed to acquaint the industrial electrician with the proper methods of troubleshooting, disassembly, repair, reassembly, adjustment, alignment and testing
of brakes, clutches, gear trains, drives, couplings, and synchro-servo systems. Four contact hours: two lecture hours; two laboratory hours.

**EER 2131 Control of DC Machines (O) 3 cr.**
Prerequisite: EER 2413. This course is designed to cover the principles, operations, and characteristics, and troubleshooting of magnetic and solid state direct current motor controls. Four contact hours: two lecture hours; two laboratory hours.

**EER 2222 Control of AC Machines (O) 3 cr.**
Prerequisite: EER 2131. This course is designed to cover the principles, operation, characteristics, and troubleshooting of magnetic and solid state alternating current motor controls. Four contact hours: two lecture hours; two laboratory hours.

**EER 2261 AC/DC Machinery and Transformers (O) 3 cr.**
Prerequisite: EER 1210. This course is an introduction to AC/DC machinery beginning with electric motors and generators. It covers their construction, operating characteristics, types and applications. It also covers single and polyphase transformers covering construction, theory, characteristics and applications. Four contact hours: two lecture hours; two laboratory hours.

**EER 2311 Home Appliances, Maintenance and Service I (O) 4 cr.**
Prerequisite: EER 1210. This course is designed to teach the necessary skills in repair, service and installation of appliances, the correct use of test equipment, reading wiring diagrams, schematic tracing, timer sequence charts, the removal and reinstallation of components, and the troubleshooting of the clothes washer and dryer. Six contact hours: two lecture hours; four laboratory hours.

**EER 2312 Home Appliances, Maintenance and Service II (O) 4 cr.**
Prerequisite: EER 1210. This course is designed to teach the necessary skills in service and repairs, the installation of appliances, the proper use of test equipment, reading wiring diagrams, schematic tracing timer sequences charts, the removal, test and reinstallation of major components, and the troubleshooting of the dishwasher and water heater. Six contact hours: two lecture hours; four laboratory hours.

**EER 2351 Test Equipment Maintenance and Service (O) 4 cr.**
Prerequisite: EER 2411. This course includes instruction in the circuitry, troubleshooting method, repair and calibration of major types of test equipment used in the electronic field. "Hands-on" experiments will also be included. Eight contact hours (laboratory).

**EER 2352 Advanced Electrical/Electronic Systems (O) 3 cr.**
Prerequisite: EER 2360, or with professor's consent. This course is a study in the measuring devices and control systems utilized in industrial electronics and other related fields such as power, motor control, light dimmers, smog detectors, fire alarms, burglary alarms, pressure, weight and frequency control circuits/devices. These will be designed and tested in both classroom and laboratory exercises. Six contact hours (laboratory).

**EER 2360 Basic Circuit Diagnosis and Repair (O) 4 cr.**
Prerequisite: EER 2821, or with professor's consent. The tools used, the methods of troubleshooting and the repair of circuits described in EER 2821 will be demonstrated in the classroom and proven in the laboratory exercise with "live" equipment. Some communications circuits will be explored. Eight contact hours (laboratory).

**EER 2401 Industrial Electrical Installations (O) 3 cr.**
This course is designed to teach electrical services, branch circuit installations, power distribution systems, bus transfers, conduit installations, and design of electrical wiring for industrial applications. Four contact hours: two lecture hours; two laboratory hours.

**EER 2411 Digital Electronics (O) 4 cr.**
Prerequisite: EER 2352. Base 2-5-8 and 16 numbering methods will be demonstrated and applied in mathematical problems along with Boolean algebra. The application of binary will be used in both lecture and laboratory to describe the function of various logic gates/families and operational amplifiers. Eight contact hours (laboratory).

**EER 2413 Industrial Applications of Solid State Devices (O) 4 cr.**
Prerequisite: EER 1291. This course is designed to cover the principles of operation of solid state semiconductor devices. Various circuit configurations and basic applications will be explained in the classroom followed by laboratory experience therein. Six contact hours: two lecture hours; four laboratory hours.

**EER 2451 Heating and Air Conditioning For Electricians (O) 3 cr.**
This course is designed to cover the electrical components, systems, and operation of modern heating and air conditioning equipment. Industrial applications, servicing procedures, and troubleshooting will be presented in the classroom followed by practical experience in the laboratory. Four contact hours: two lecture hours; two laboratory hours.

**EER 2811 Sinusoidal Electronics (O) 3 cr.**
Prerequisite: EER 1281, or with professor's consent. The many circuits used in industry and other related electronic fields will be taught and tested. These circuits include power supplies, amplifiers, oscillators utilizing bipolar and special designed semiconductor devices. Printed circuit boards will be discussed and fabricated in the laboratory. Six contact hours (laboratory).

**EER 2821 Non-Sinusoidal Electronics (O) 4 cr.**
Prerequisite: EER 2811. A study of various circuits and systems which are designed to operate with non-sinusoidal waveforms, and in some cases both sinusoidal and non-sinusoidal at the same time, will be explored in the classroom and laboratory. This course includes many of the circuits contained in radar, navigation aids and computer circuits. Eight contact hours (laboratory).

**EER 2831 Computer Circuit Analysis (O) 4 cr.**
Prerequisite: EER 2411. Starting with a simplified block diagram of a computer, this course will expand to both discrete and I.C. circuit analysis of computers used today. Laboratory work will utilize microprocessor systems for programming and maintenance techniques. Eight contact hours (laboratory).

**EGN – Engineering: General**

**EGN 1130C Descriptive Geometry (D) 3 cr.**
Prerequisite: ETD 1100C. Theory and practice in solving graphic problems involving point, line, and space relationships. Four contact hours: two lecture hours; two laboratory hours.
EHD – Education:
Hard of Hearing and Deaf

EHD 1000 Orientation to Deafness (D) 3 cr.
This is an introductory course in which the meaning, causes, and scope of deafness are considered with regard to its implications on personal, family and community life. This course includes an historical review of the education of the hearing impaired. A review of the linguistic background, dialects and systems of sign language will be given. Students will learn of referral sources and the various agencies on national, state and local levels which serve the hearing impaired. Language development will be studied as it relates to deafness, hearing and auditory pathology. Three contact hours.

EHD 1400 Introduction to Interpreting (D) 3 cr.
This course will offer students an opportunity to observe actual classroom interpreting, to participate in minimal interpreting duties, and to periodically review and refine techniques and speed in interpreting. This course is designed primarily to improve and refine interpreting skills through observation and practice. Three contact hours.

EMS – Emergency Medical Services

EMS 1059 First Responders: Emergency Care Training (D) 3 cr.
This course is designed to provide the student with basic skills necessary to save a life, minimize patient discomfort and prevent further injury. The content of this course is specifically designed for the non-medical person who wishes to learn basic life saving skills. Upon successful completion of this course one is qualified in basic life support and prepared to enter EMS 1119, as prerequisite skills are a part of the course content. This course may not be used as an elective by students entering the AS or Certificate Paramedic program. Three contact hours.

EMS 1119 Fundamentals of Emergency Medical Care (D) 6 cr.
Prerequisites: EMS 1059 or permission of professor. Corequisites: EMS 1119L, APB 2190C. This course is designed to prepare persons for initial employment as an EMT and includes current techniques practiced by a First-Level EMT providing emergency medical care. On successful completion of this course and the corequisite EMS 1119L, one is qualified to take the State Registry Examination for EMT Level I. Six contact hours.

EMS 1119L Fundamentals of Emergency Medical Care Clinical Experience (D) 2 cr.
Emergency procedures for life-threatening problems will be demonstrated and practiced in the College laboratory. Clinical rotation will be required in local hospital emergency care facility. Four contact hours: one laboratory hour; three clinical hours.

EMS 2231 EMT-Paramedic Phase I (D) 4 cr.
Prerequisites: EMS 1119, EMS 1119L, APB 2190C; Corequisites: EMS 2231L, APB 2191C. The first part of a three-term sequence of instruction for the EMT-Paramedic. This course is designed to conform with the guidelines provided by the Department of Transportation. Unit of study includes the following modules: The EMT, Human Systems and Patient Assessment, Shock and Fluid Therapy, Respiratory System, and Emergency Care of the Emotionally Disturbed. Four contact hours.

EMS 2231L EMT-Paramedic Phase I Lab/Clinical (D) 3 cr.
Prerequisites: EMS 1119, EMS 1119L, APB 2190C; Corequisites: EMS 2231 and APB 2191C. The clinical program consists of a three-term sequence. This clinical will include an emergency room, operating and recovery room, morgue and psychiatric in-hospital rotation. Laboratory and clinical application of experiences are a continuum of EMS 2231. Six contact hours: two laboratory hours; four clinical hours.

EMS 2232 EMT-Paramedic Phase II (D) 5 cr.
Prerequisites: EMS 2231, EMS 2231L and APB 2191C. Corequisite: EMS 2232L. A continuation of EMT-Paramedic Phase I. The units of study include the Cardiovascular System, General Pharmacology, Central Nervous System, Telemetry and Communications. Five contact hours.

EMS 2232L EMT-Paramedic Phase II Lab/Clinical (D) 3 cr.
Prerequisites: EMS 2231, EMS 2231L. Corequisite: EMS 2232. A continuation of Phase I. This clinical will include an intensive care and critical care in-hospital rotation. Six contact hours: two laboratory hours; four clinical hours.

EMS 2233 EMT-Paramedic Phase III (D) 4 cr.
Prerequisites: EMS 2232, EMS 2232L. Corequisite: EMS 2233L. The last part of the three term sequences of EMT-Paramedic instruction. Modules of study include: Soft Tissue Injuries, Musculoskeletal System, Medical Emergencies, Obstetric/Gynecologic Emergencies, Extrication/Rescue Techniques, Pediatric and Neonatal Transport. Four contact hours.

EMS 2233L EMT-Paramedic Phase III Lab/Clinical (D) 6 cr.
Prerequisites: EMS 2232, EMS 2232L. Corequisite: EMS 2233. The last part of the three-term sequences of clinical experiences. This clinical rotation will require riding a Mobile Intensive Care Unit and hospital rotation in a local emergency care facility. Twelve contact hours: one laboratory hour; eleven clinical hours.

ENC – English Composition

ENC 0002 Introduction to Composition 4 cr.
This course is designed to develop the student’s skills in grammar, spelling, and vocabulary through writing. Individualized, self-paced practice in specific skills is provided through laboratory work. This course does not apply toward an associate degree. Five contact hours: three lecture hours; two laboratory hours.

ENC 1101 English Composition I (P) 3 cr.
Prerequisite: Satisfactory score on placement test. This course embodies the fundamentals of effective expression with emphasis on various forms of expository writing, logical and imaginative thinking and reading for understanding. The course provides instruction in sentence structure, diction, organization of short essays and correct usage of standard American English. Three contact hours.

ENC 1102 English Composition II (P) 3 cr.
Prerequisite: ENC 1101. A continuation of ENC 1101. This course includes study and practice in research writing. Three contact hours.

ENC 2210 Technical Report Writing (D) 3 cr.
Prerequisite: ENC 1101. This is a communications course giving primary emphasis to writing for the professions. The
course places stress on the use of factual information in descriptive, analytical and researched recommendation reports. The course also provides instruction in writing effective and timely letters, memoranda and informational reports; developing graphs and illustrations; and presenting oral reports. Three contact hours.

ENL 2013 English Literature I (P) 3 cr.
Prerequisite: ENC 1102. An introduction to the main literary traditions from Beowulf through the Restoration and Eighteenth Century. A study of the best and most characteristic writings of these periods. Three contact hours.

ENL 2023 English Literature II (P) 3 cr.
Prerequisite: ENC 1102. An introduction to the main literary traditions from the Romantic and Victorian periods to the present. Study of the best and most characteristic writings of these periods. Three contact hours.

ETC 2220C Soils and Foundations (D) 3 cr.
Prerequisite: ETC 2535C. This course covers the criteria used in the selection, design, and construction of the elements of a structure that transfers its total load to the underlying formations. Theoretical aspects considered and treated are: analysis of subsoil conditions, bearing capacity and settlement analysis, character of natural soil deposits, earth pressure and retaining wall theory, and stability of slopes and subgrades. Basic types of prevalent foundations, their design and behavior characteristics are covered. Four contact hours: three lecture hours; one laboratory hour.

ETC 2410C Structural Drafting (D) 3 cr.
Prerequisites: ARC 2102, ETD 2121C. This course is a study of the required steel and concrete plans for buildings and the preparation of the shop details from those plans. Given the structural design of a building, the student prepares both the structural plan and the shop details necessary for the fabrication of the structural members. Four contact hours: two lecture hours; two laboratory hours.

ETC 2450C Concrete (D) 3 cr.
Prerequisite: ETCH 2121C. The course is a study of the fundamentals of concrete including the field laboratory procedures used to achieve quality control. Topics examined in the course include: the design of concrete mixtures, admixtures, placement, and special types of concrete. Four contact hours: two lecture hours; two laboratory hours.

ETC 2500C Highway Drafting and Route Design (D) 3 cr.
Prerequisites: ETC 2410C, ETC 2504C. This course is concerned with the elements of a transportation roadway and its functions, the effects of traffic and functions, the effects of traffic and vehicular characteristics on road design, length of highway, curvature and elevation of roadbeds, and earthwork computations applied to highway route design. Four contact hours: two lecture hours; two laboratory hours.

ETC 2521C Hydrology and Hydraulics (D) 3 cr.
Corequisite: ETC 2535C. This course is a study of sources, collection, drainage areas, storm water runoff and pump sizing. The subject matter includes the laws of fluid mechanics, such as fluids, energy and head, pressure flow in pipes and pumps, and liquid flow in open channels. The laboratory time is used for fluid flow calculation and design. Four contact hours: three lecture hours; one laboratory hour.

ETD 1100C Engineering Drawing (D) 3 cr.
A survey course of the principles and practices involved in making and reading engineering drawings. Emphasis is placed on lettering, industrial symbolism, orthographic projection, and multiview representation. Four contact hours: two lecture hours; two laboratory hours.

ETD 1645C Mechanical and Electrical Drafting (D) 3 cr.
Prerequisite: ETD 1100C. Suggested corequisite: EGN 1130C. A course in mechanical and electrical drafting. Emphasis is on assembly and detail drawings of mechanical parts. Included is an introduction to electrical drafting. Four contact hours: two lecture hours; two laboratory hours.

ETD 2121C Civil Drafting (D) 3 cr.
Prerequisite: ETD 1100C. A survey course covering structural and topographical drafting. Samples of drafting for buildings, bridges, towers, and other structures will be included, teaching structural design principles. The topographical unit will include drawing maps from information obtained in a survey, by aerial photography, etc. The making of contour maps, the meaning of various symbols, and the conventions peculiar to topography will be taught. Four contact hours: two lecture hours; two laboratory hours.

ETE 1001 Fundamentals of General Electricity (D) 3 cr.
A survey course of the electrical field covering both direct current and alternating current theory, and basic electrical elements. It is designed for the non-electrical engineering technician to provide a general knowledge of electrical phenomena. Three contact hours.

ETE 1010C DC Theory and Circuits (D) 3 cr.
Prerequisite: MAT 1033 or the equivalent. A course of study in the basic nature of electricity, covering: atomic structure as related to current carriers, electrical units, and conversion within and between systems of units; current voltage, resistance, Ohm's Law, Kirchhoff's Current, and Voltage Laws; Thévenin's Theorem; power, work and energy, series and parallel circuits, magnetism, capacitors, inductors, and measuring instruments devoted to the application of acquired theory. Emphasis on the proper use of modern electronic measuring equipment is included. Five contact hours: three lecture hours; two laboratory hours.

ETE 1020C AC Theory and Circuits (D) 3 cr.
Corequisite: MAC 1114; Prerequisite: ETE 1010C. A study of wave-forms with emphasis on sinusoidal waves and the analysis of steady-state electrical circuits. Topical Units of instruction include: Sinusoidal Alternating Current Phases, Series and Parallel AC Circuits and Networks, Power, Transformers, Resonance, Polyphase Systems. A laboratory course designed to reinforce the student's understanding of important theoretical concepts. Five contact hours: three lecture hours; two laboratory hours.
EHD – Education: Hard of Hearing and Deaf

EHD 1000 Orientation to Deafness (D) 3 cr.
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Prerequisites: EMS 1119, EMS 1119L, APB 2190C; Corequisites: EMS 2231L, APB 2191C. The first part of a three-termd sequence of instruction for the EMT-Paramedic. This course is designed to conform with the guidelines provided by the Department of Transportation. Unit of study includes the following modules: The EMT, Human Systems and Patient Assessment, Shock and Fluid Therapy, Respiratory System, and Emergency Care of the Emotionally Disturbed. Four contact hours.

EMS 2231L EMT-Paramedic Phase I Lab/Clinical (D) 3 cr.
Prerequisites: EMS 1119, EMS 1119L, APB 2190C; Corequisites: EMS 2231 and APB 2191C. The clinical program consists of a three-term sequence. This clinical will include an emergency room, operating and recovery room, morgue and psychiatric in-hospital rotation. Laboratory and clinical application of experiences are a continuum of EMS 2231. Six contact hours: two laboratory hours; four clinical hours.

EMS 2232 EMT-Paramedic Phase II (D) 5 cr.
Prerequisites: EMS 2231, EMS 2231L and APB 2191C. Corequisite: EMS 2232L. A continuation of EMT-Paramedic Phase I. The unit of study includes the Cardiovascular System, General Pharmacology, Central Nervous System, Telemetry and Communications. Five contact hours.

EMS 2232L EMT-Paramedic Phase II Lab/Clinical (D) 3 cr.
Prerequisites: EMS 2231, EMS 2231L. Corequisite: EMS 2232. A continuation of Phase I. This clinical will include an intensive care and critical care in-hospital rotation. Six contact hours: two laboratory hours; four clinical hours.

EMS 2233 EMT-Paramedic Phase III (D) 4 cr.
Prerequisites: EMS 2232, EMS 2232L. Corequisite: EMS 2233L. The last part of the three term sequences of EMT-Paramedic instruction. Modules of study include: Soft Tissue Injuries, Musculoskeletal System, Medical Emergencies, Obstetric/Gynecologic Emergencies, Extrication/Rescue Techniques, Pediatric and Neonate Transport. Four contact hours.

EMS 2233L EMT-Paramedic Phase III Lab/Clinical (D) 6 cr.
Prerequisites: EMS 2232, EMS 2232L. Corequisite: EMS 2233. The last part of the three-term sequences of clinical experiences. This clinical rotation will require riding a Mobile Intensive Care Unit and hospital rotation in a local emergency care facility. Twelve contact hours: one laboratory hour; eleven clinical hours.

ENC – English Composition

ENC 0002 Introduction to Composition 4 cr.
This course is designed to develop the student's skills in grammar, spelling, and vocabulary through writing. Individualized, self-paced practice in specific skills is provided through laboratory work. This course does not apply toward an associate degree. Five contact hours: three lecture hours; two laboratory hours.

ENC 1101 English Composition I (P) 3 cr.
Prerequisite: Satisfactory score on placement test. This course embodies the fundamentals of effective expression with emphasis on various forms of expository writing, logical and imaginative thinking and reading for understanding. The course provides instruction in sentence structure, diction, organization of short essays and correct usage of standard American English. Three contact hours.

ENC 1102 English Composition II (P) 3 cr.
Prerequisite: ENC 1101. A continuation of ENC 1101. This course includes study and practice in research writing. Three contact hours.

ENC 2210 Technical Report Writing (D) 3 cr.
Prerequisite: ENC 1101. This is a communications course giving primary emphasis to writing for the professions. The
course places stress on the use of factual information in
descriptive, analytical, and researched recommendation
reports. The course also provides instruction in writing
effective and timely letters, memoranda and informational
reports; developing graphs and illustrations; and present-
ing oral reports. Three contact hours.

ENL – English Literature

ENL 2013 English Literature I (P) 3 cr.
Prerequisite: ENC 1102. An introduction to the main liter-
ary traditions from Beowulf through the Restoration and
Eighteenth Century. A study of the best and most character-
estric writings of these periods. Three contact hours.

ENL 2023 English Literature II (P) 3 cr.
Prerequisite: ENC 1102. An introduction to the main liter-
ary traditions from the Romantic and Victorian periods to
the present. Study of the best and most characteristic writ-
ings of these periods. Three contact hours.

ETC – Engineering Technology: Civil

ETC 2220C Soils and Foundations (D) 3 cr.
Prerequisite: ETG 2535C. This course covers the criteria
used in the selection, design, and construction of the ele-
ments of a structure that transfers its total load to the
underlying formations. Theoretical aspects considered and
treated are: analysis of subsoil conditions, bearing capacity
and settlement analysis, character of natural soil deposits,
earth pressure and retaining wall theory, and stability of
slopes and subgrades. Basic types of prevalent foundations,
their design and behavior characteristics are covered. Four
contact hours: three lecture hours; one laboratory hour.

ETC 2410C Structural Drafting (D) 3 cr.
Prerequisites: ABC 2120C, ETD 2121C. This course is a
study of the required steel and concrete plans for building
and the preparation of the shop details from those plans.
Given the structural design of a building the student prep-
ares both the structural plan and the shop detail necessary
for the fabrication of the structural members. Four
contact hours: two lecture hours; two laboratory hours.

ETC 2450C Concrete (D) 3 cr.
Prerequisite: ETI 1421C. The course is a study of the funda-
mentals of concrete including the field-laboratory pro-
cedures used to achieve quality control. Topics examined in
the course include: the design of concrete mixtures, admix-
tures, placement, and special types of concrete. Four contact
hours: two lecture hours; two laboratory hours.

ETC 2500C Highway Drafting and Route Design (D) 3 cr.
Prerequisites: ETC 2410C, ETG 2504C. This course is con-
cerned with the elements of a transportation roadway and
their functions, the effects of traffic and functions, the
effects of traffic and vehicular characteristics on road
design, length of highway, curvature and elevation of road-
beds, and earthwork computations applied to highway route
design. Four contact hours: two lecture hours; two labora-
tory hours.

ETC 2521C Hydrology and Hydraulics (D) 3 cr.
Prerequisite: ETG 2536C. This course is a study of sources,
collection, drainage areas, storm water runoff and pump siz-
ing. The subject matter includes the laws of fluid mechanics,
such as fluids, energy and head, pressure flow in pipes and
pumps, and liquid flow in open channels. The laboratory
time is used for fluid flow calculation and design. Four con-
act hours: three lecture hours; one laboratory hour.

ETD – Engineering Technology: Drafting

ETD 1100C Engineering Drawing (D) 3 cr.
A survey course of the principles and practices involved in
making and reading engineering drawings. Emphasis is
placed on lettering, industrial symbolism, orthographic pro-
jection, and multiview representation. Four contact hours:
two lecture hours; two laboratory hours.

ETD 1645C Mechanical and Electrical Drafting (D) 3 cr.
Prerequisite: ETD 1100C. Suggested corequisite: EGN
1130C. A course in mechanical and electrical drafting.
Emphasis is on assembly and detail drawings of mechanical
parts. Included is an introduction to electrical drafting.
Four contact hours: two lecture hours; two laboratory hours.

ETD 2121C Civil Drafting (D) 3 cr.
Prerequisite: ETD 1100C. A survey course covering struc-
tural and topographical drafting. Samples of drafting for
buildings, bridges, towers, and other structures will be
included, teaching structural design principles. The topo-
ographical unit will include drawing maps from information
obtained in a survey, by aerial photography, etc. The making
of contour maps, the meaning of various symbols, and the
conventions peculiar to topography will be taught. Four con-
act hours: two lecture hours; two laboratory hours.

ETE – Engineering Technology: Electrical

ETE 1001 Fundamentals of General Electricity (D) 3 cr.
A survey course of the electrical field covering both direct
current and alternating current theory, and basic electrical
elements. It is designed for the non-electrical engineering
technician to provide a general knowledge of electrical phe-
nomena. Three contact hours.

ETE 1010C DC Theory and Circuits (D) 3 cr.
Prerequisite: MAT 1033 or the equivalent. A course of study
in the basic nature of electricity, covering: atomic structure
as related to current carriers, electrical units, and conver-
sion within and between systems of units; current voltage,
resistance, Ohm's Law, Kirchhoff's Current, and Voltage
Laws; Thévenin's Theorem, power, work and energy, series
and parallel circuits, magnetism, capacitors, inductors, and
measuring instruments devoted to the application of acquired
theory. Emphasis on the proper use of modern electronics
measuring equipment is included. Five contact hours:
three lecture hours; two laboratory hours.

ETE 1020C AC Theory and Circuits (D) 3 cr.
Corequisite: MAC 1114; Prerequisite: ETE 1010C. A study
of wave-forms with emphasis on sinusoidal waves and the
analysis of steady-state electrical circuits. Typical Units of
instruction include: Sinusoidal Alternating Current Pha-
sors, Series and Parallel AC Circuits and Networks, Power,
Transformers, Resonance, Polyphase Systems. A laboratory
course designed to reinforce the student's understanding of
important theoretical concepts. Five contact hours: three
lecture hours; two laboratory hours.
ETE 1810 Biomedical Technology and Techniques (O) 2 cr.
Prerequisite: ETE 1725. This course is designed to introduce the students to the hospital, biomedical equipment manufacturers, and the contract maintenance organizations. Special emphasis on the organizational structure of the hospital will be undertaken identifying the role of the BMET within this framework. The course will also introduce students to the literature in professional journals covering facets of the BMET's job, with particular emphasis on instrument critiques, electrical safety standards, and new products. Finally, the course will utilize a system approach in analyzing how technology is applied in the health care setting, from the medical and administrative management viewpoints. Systems such as the intensive care unit, cardiovascular diagnostic laboratory and the operating rooms will be analyzed. Two contact hours.

ETE 2101C Introduction to Solid State Electronics (D) 3 cr.
Prerequisite: ETE 1010C. Corequisite: ETE 1020C. This is an introductory course covering the principles of operation of solid-state semiconductors and circuits. Emphasis is on PN junctions, junction diodes, and bipolar transistors. Participation in laboratory exercises is required. Four contact hours: two lecture hours; two laboratory hours.

ETE 2111C Amplifier Circuits (D) 3 cr.
Prerequisite: ETE 2101C. This course covers small-signal and power bipolar transistor amplifiers. It also includes coverage of field-effect transistor and vacuum tube amplifier circuits. Laboratory participation is required. Four contact hours: two laboratory hours; two lecture hours.

ETE 2141C Linear Semiconductor Analysis (D) 3 cr.
Prerequisite: ETE 2111C. This course is a study of more advanced linear semiconductor devices and their associated circuitry. It concentrates on integrated circuits and provides a good coverage of operational amplifiers. In addition the topics of feedback, frequency effects, and voltage regulation are considered in detail. Four contact hours: three lecture hours; one laboratory hour.

ETE 2411C Communications Electronics I (O) 3 cr.
Prerequisite: ETE 2111C. This is an introductory course in the specialized field of Communications Electronics. It includes the fundamental concepts of communications, communications circuits, and signal modulation. This course is intended for the student who has already acquired a solid foundation in electricity and electronics and desires to specialize in Communications Electronics. Four contact hours: three lecture hours; one laboratory hour.

ETE 2421C Communications Electronics II (O) 3 cr.
Prerequisites: ETE 2111C, ETE 2833C. This course is a continuation of Communications Electronics I and includes transmission of radiation of signals, waveguides and antennas, telephone and television systems, and digital communications systems. Four contact hours: three lecture hours; one laboratory hour.

ETE 2527C Electrical-Electronic Control Systems (D) 3 cr.
Prerequisites: ETE 2101C, ETE 2111C. A study of the operation and control of industrial equipment and processes including motors and the controlling systems involved in their operation and protection. Four contact hours: two lecture hours; two laboratory hours.

ETE 2601C Introduction to Digital Electronics (O) 3 cr.
Prerequisite: ETE 2101C. This is an introductory course covering solid-state digital circuits, number systems, logic gates, digital codes, Boolean algebra, Karnaugh mapping, and combinational logic. Laboratory participation is required. Four contact hours: two lecture hours; two laboratory hours.

ETE 2633C Computer Logic Circuits (O) 3 cr.
A study of computer circuits and systems. Flip-flops and counters, registers, arithmetic units, computer memory, D/A and A/D conversions. Digital integrated circuits and introduction to microprocessors. Four contact hours: two lecture hours; two laboratory hours.

ETE 2648C Computer Peripherals and Interfacing (O) 3 cr.
Prerequisites: ETE 2633C, ETE 2680C. This course is a study of the interrelationships between the computer control processing unit and peripheral input/output devices. Interfacing considerations between the C.P.U. and series/parallel terminals are emphasized. General troubleshooting and routine maintenance procedures common to the computer industry are included as an integral part of the course. Four contact hours: three lecture hours; one laboratory hour.

ETE 2680C Microprocessors (O) 3 cr.
Prerequisite: ETE 2633C. This course is designed to teach the fundamentals of programmable logic devices: the microprocessor integrated circuit device, peripheral input/output devices, and analog/digital interface devices. The principles common to all modern microprocessors are developed with emphasis on the microprocessor-based process control system and machine-level programming, along with the basic concepts involved in microprocessor hardware. Laboratory experiments are required. Four contact hours: two lecture hours; two laboratory hours.

ETE 2761C Robotics (O) 3 cr.
Prerequisites: ETE 2577C, ETE 2689C, ETE 2633C, ETE 2504C, ETEM 2310. This course covers the fundamentals of operation, construction, repair, and servicing of robots from the technician's point of view. Along with the prerequisite courses it will prepare the technician to install and maintain robots and other related automated industrial equipment. Hands-on exercises with training robots in the areas of assembly, troubleshooting, and programming will be required of each student. Four contact hours: three lecture hours; one laboratory hour.

ETE 2815C Biomedical Instrumentation I (O) 3 cr.
Prerequisites: ETE 2111C, ETE 2633C. This course is designed to introduce students to the biomedical equipment used in patient vital signs measurement and monitoring equipment, respiratory system measurement and monitoring and the clinical environment in which devices are used. Students will learn external operating characteristics of devices as well as internal circuitry. These concepts will be utilized in verifying device performance, in performing necessary calibration, and in learning preventive and corrective maintenance techniques. Four contact hours: two lecture hours; two laboratory hours.

ETE 2816C Biomedical Instrumentation II (O) 3 cr.
Prerequisite: ETE 2815C. This course is designed to introduce students to the remaining biomedical equipment of significance typically utilized in the health care setting, i.e. in the operating room, the labor and delivery room, radiology, nuclear medicine, radiation therapy and clinical laboratory. Students will learn external operation of devices, their internal electronic circuitry and the clinical environment in which they are used. These concepts will be utilized in the lab to verify device performance, perform calibration and to learn preventive and corrective maintenance techniques. Four contact hours: two lecture hours; two laboratory hours.
ETE 2940 Biomedical Practicum (O) 3 cr.
Prerequisites: ETE 2141C, ETE 2527C, ETC 2815C. This course is designed to provide the student with the essential electronic troubleshooting and clinical skills necessary to function as a competent biomedical equipment technician in a hospital setting. The course will be conducted at various local hospitals and will consist of supervised device circuit analysis, troubleshooting training and "on the job" training with practicing EMETS. Eight contact hours: laboratory.

ETG – Engineering Technology:
General

ETG 1201C X-Ray Physics (D) 3 cr.
Prerequisites: MAC 1104 and ETE 1010C. This course is the first in a series of required courses in the X-Ray Technology option of the Electronics Engineering Technology Program. The course includes coverage of those fundamentals of physics required to fully understand the nature of x-rays, how x-ray machines work, and how other modern devices are used to enhance information from x-ray equipment. Processing radiographs, image intensification, special radiographic methods, and a study of radiation hazards and protection are also covered. A field trip to medical diagnostic x-ray rooms is included. Four contact hours: three lecture hours; one laboratory hour.

ETG 2202C X-Ray Systems (D) 3 cr.
Prerequisite: ETG 1201C. This course is the second in a series of courses required in the X-Ray Technology option of the Electronics Engineering Technology Program. The course is centered on the practical application of principles in the laboratory where an X-Ray Unit Trainer (XRUT) is used to learn how to read schematic diagrams and to learn what functions x-ray machine sub-systems perform. Components are arranged and connected on a "breadboard model" to get experience in "hands on" wiring and assembly of hardware and to learn the technique of relating the schematic diagram to the physical machine. Film processing and x-ray safety along with the ethics required in medical x-ray equipment service are also emphasized. Six contact hours: three lecture hours; three laboratory hours.

ETG 2204C X-Ray Practicum (O) 3 cr.
Corequisite: X-Ray Systems (ETG 2202C). This course is the third in a series of courses in the X-Ray Technology option of the Electronics Engineering Technology Program. The course is designed to provide the student with practical experience in the field by working side-by-side with service technicians of x-ray equipment vendors/representatives in real time service situations which develop within the local environs. In addition to developing skills in fault isolation, equipment repair, maintenance, service and calibration of medical diagnostic x-ray machinery, the student also is provided the opportunity to gain experience in service ethics and personal conduct as a professional service person. Six contact hours: one lecture hour; five laboratory hours.

ETG 2205C X-Ray Imaging Systems (O) 3 cr.
Prerequisite: ETG 2202C. This course is the fourth in a series of courses required in the X-Ray Technology option of the Electronics Engineering Technology Program. The course emphasizes the practical application of principles in laboratory experience and actual X-Ray Imaging Systems. X-Ray Image Intensifiers and Closed Circuit Television Units will be used to get hands on experience in proper installation, adjustment, calibration, troubleshooting and repair techniques. Schematic diagrams of solid state and vacuum tube circuits will be analyzed to give the student some practical experience at relating technical information with the actual equipment in use. Six contact hours: three lecture hours; three laboratory hours.

ETG 2504C Engineering Mechanics (D) 4 cr.
Prerequisites: MAC 1114, ETI 1421C. This course is an introduction to the basic laws of mechanics and includes a study of forces systems, moments, couples, static equilibrium, centroids, friction, work, and energy. The laboratory portion of the course will emphasize the practical aspects of the above topics and will include exercises in measurements, drive systems, linkages, support members, etc. Five contact hours: three lecture hours; two laboratory hours.

ETG 2535C Testing and Strength of Materials (D) 4 cr.
Prerequisite: ETG 2504C. This course is a study of the basic concepts involved in determining the resistance of engineering materials of various loads with emphasis on the applied use of various formulas for a systematic analysis. The laboratory portion of the course involves actual stress testing with stress testing equipment. Five contact hours: three lecture hours; two laboratory hours.

ETI – Engineering Technology:
Industrial

ETI 1121 Introduction to Nondestructive Testing (O) 3 cr.
This course reviews the basic principles underlying nondestructive testing. It is anticipated that interested students will be stimulated by this course to seek additional information in more extensive works on nondestructive testing. Course will cover types of inspection, to include visual, radiographic, magnetic particle, ultrasonic, dye penetrant, eddy current, acoustical holographic, thermal, as well as new research and development in nondestructive testing. Three contact hours.

ETI 1122C Nondestructive Testing: Liquid Penetrants and Magnetic Particles (O) 3 cr.
Prerequisite: ETI 1121, or permission of professor. The study of types and uses of liquid penetrants as they pertain to non-destructive testing to include development, application, compatibility and tests of penetrant materials. A study of magnetic particle theory and test of materials and equipment. Four contact hours: three lecture hours; one laboratory hour.

ETI 1421C Engineering Materials and Processes (D) 3 cr.
A survey of the basic materials used in industry, metallic and non-metallic, and the processes used to form, fabricate, and finish these materials. Three contact hours.

ETI 1700 Industrial Safety (D) 3 cr.
This course is designed to impart the knowledge essential to safe practices in industry. It covers major aspects of Federal Government regulations promulgated by the U.S. Department of Labor, Occupational Safety & Health Administration. Three contact hours.

ETI 1725 Biomedical Safety and Terminology (O) 2 cr.
Prerequisites: APB 2190C, ETI 1020C. This course is designed to impart the knowledge essential to safe practices in the handling of biomedical patient-care devices. It covers all aspects of regulations and guidelines as promulgated by the National Fire Protection Association (NFPA) and the Joint Commission on Accreditation of Hospitals (JCAH). The course will provide training in medical terminology, with particular emphasis on applied anatomy and applied physiology. The students will gain proficiency in speaking, hearing, writing and defining medical terms. Two contact hours.
ETI 2440C    Industrial Design (D)  3 cr.
Prerequisite or corequisite: EGN 1130C. A course designed to give the student knowledge and practice in common industrial design methods. Emphasis is on elements of good design and functional and proper presentation of design. Six contact hours; two lecture hours; four laboratory hours.

ETI 2681    Industrial Supervision (D)  3 cr.
The purpose of this course is to prepare the student for a role in the world of work as the student assumes responsibilities leading toward supervisory positions and management. Three contact hours.

ETM – Engineering Technology: Mechanical

ETM 2221    Elements of Applied Energy (D)  3 cr.
Prerequisites: MTB 1322, ETI 1421C. An introduction to applied thermodynamics. The study of the transformation of energy to useful work through mechanical elements: heat engines, I.C. engines, compressors, turbines, and ancillary equipment. Three contact hours.

ETM 2310C    Fluid Mechanics (D)  3 cr.
Prerequisites: MAC 1114, ETI 1421C. This course is a study of the laws involving the flow of fluids and their application of the processes, equipment and machines that are used in the energy-to-work transformation. Both hydraulics and pneumatics are emphasized in the course and the laboratory exercises concentrate on fluid power. Four contact hours: three lecture hours; one laboratory hour.

ETM 2610C    Air Conditioning and Heating (D)  3 cr.
Prerequisites: MAC 1114 or ETI 1421C. An introductory course to environmental control of buildings and houses with emphasis on equipment performance and system design. Three contact hours.

ETM 2800    Fundamentals of Metallurgy (O)  3 cr.
A course designed to teach the behavior, characteristics, terms and manufacturing process of ferrous and non-ferrous metals. Topics included are metal selection, altering metal performance with thermal and mechanical treatment, and powder metallurgy. Three contact hours.

EUH – European History

EUH 1000    Western Civilization (P)  3 cr.
A survey of the cultural beginnings of civilization and the diffusion and accumulation of culture through 1715: Ancient Egypt, Mesopotamia, Greece, Rome, Byzantium, Islam, the Medieval Period, the Renaissance, and the Protestant Revolt. Three contact hours.

EUH 1001    Western Civilization (P)  3 cr.
Modern western institutions from 1715 to the present day. Includes the developing capitalistic system, absolutism, the Enlightenment, the era of revolutions, the Constitution of the United States, the development of democracy, the industrial revolution, nationalism, the world wars, and the cold war. Three contact hours.

FAD – Family Development

FAD 1230    Dynamics of Modern Living (D)  3 cr.
A study of the interpersonal relationship to include personal and family problems: analysis of the basic elements involved in courtship, mate selection, engagement, marriage, parenthood, and child development. Also covered are topics such as principles of good manners and acceptable standards of social behavior, personal appearance, social customs, personality development, human relations and consideration of the various occupational opportunities within the broad field of home and family life education. Three contact hours.

FAD 1251    Parenting Your Child (O)  3 cr.
Instruction in this course emphasizes skills and concepts conscientious parents of young children (ages 3-11) need. This course includes parent-child communication, self-concept and self-esteem development, discipline, cultivating strong families, sibling interaction, intellectual and sexual development and societal influences impacting on children and parents. Three contact hours.

FAD 1252    Parenting Your Teenager (O)  3 cr.
Instruction in this course concentrates on helping parents of adolescents learn alternatives to traditional, handed-down parenting techniques. Parents will learn sophisticated communication skills and advanced problem solving approaches to help prepare a teen to survive in an ever-changing society. The course includes help with parent-teen interactions; social, emotional and physical issues of adolescents; conflict resolution; and analyzing the societal influence's impact on parenting. Three contact hours.

FFP – Fire Fighting and Protection

FFP 1000    Introduction to Fire Protection (D)  3 cr.
A study of the philosophical and historical backgrounds of fire protection services; the role and responsibilities of the fire service; the organization and function of federal, state, county, and private fire protection agencies; review of municipal fire defenses, fire prevention principles, techniques of fire control, codes and ordinances; problems of the fire administrator, and survey of professional fire protection career opportunities. Three contact hours.

FFP 1100    Introduction to Fire Protection and Administration (D)  3 cr.
Principles of organization and administration in fire protection service; a study of company personnel management and training, fire equipment, communications, maintenance, budgeting, records and reports, insurance rating systems, and public relations. Three contact hours.

FFP 1110    Fire Company Supervision and Management (D)  3 cr.
A review of the structure and functions of a fire company as a component of a municipal organization. Stresses the duties and responsibilities of the company officer, including planning, training, records and reports, and employee supervision. Three contact hours.

FFP 1203    Fundamentals of Fire Prevention (D)  3 cr.
Structure and function of the fire prevention organization; interpreting and applying code regulations; a study of the procedures and techniques of fire prevention, to include inspection, surveying and mapping, recognition and elimination of fire hazards; problems of public relations, and coordination with other governmental agencies. Three contact hours.

FFP 2240    Fire Investigation (D)  3 cr.
A study of the principles of fire investigation; methods of determining area of fire origin, fire cause, and fire spread; location and preservation of evidence, interrogation of witnesses, arson detection, arson laws, case preparation and court procedures, and reports and records. Three contact hours.
**FIN - Finance**

**FIN 2230**  
**Money and Banking (D)**  
3 cr.  
This course stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student to apply the student's knowledge to the particular job. Historical treatment has been kept to a minimum. Emphasis is placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments, and foreign exchange, showing their repercussions on the banking industry in affecting yield curves and the structuring of portfolios. It is recommended that BAN 1110 — Principles of Bank Operation — be taken prior to enrolling for FIN 2230. Three contact hours.

**FIN 2360**  
**Foundation and Structure of Credit Unions (O)**  
3 cr.  
The historical background and philosophy of the credit union movement is contained in this course. The structure and function of the credit union are clearly portrayed. Emphasis is placed on ethical patterns and behavior. Relationships in the credit union and professionalism are examined. Three contact hours.

**FOS - Food Science**

**FOS 1201**  
**Sanitation and Safety (D)**  
3 cr.  
The student will explore the scientific rationale for sanitation and safety practices which are enforced for group protection in institutions and food service facilities. The student will identify causative agents of food-borne illnesses and demonstrate preventive techniques by adhering to sanitation standards. Emphasis is placed on methods of accident and fire prevention. Three contact hours.

**FRE - French Language**

**FRE 1100**  
**Beginning French I (P)**  
3 cr.  
This course consists of pronunciation, grammar, conversation, exercises, reading and composition. Visual and auditory aids are employed. Four contact hours: three lecture hours; one unsupervised laboratory hour.

**FRE 1101**  
**Beginning French II (P)**  
3 cr.  
Prerequisite: FRE 1100. A continuation of FRE 1100. Four contact hours: three lecture hours; one unsupervised laboratory hour.

**FRE 2200**  
**Intermediate French I (P)**  
3 cr.  
Prerequisite: FRE 1101. Reading from modern and classic French authors, grammar review, and conversation. Four contact hours: three lecture hours; one unsupervised laboratory hour.

**FRE 2201**  
**Intermediate French II (P)**  
3 cr.  
Prerequisite: FRE 2200. A continuation of FRE 2200. Four contact hours: three lecture hours; one unsupervised laboratory hour.
FSS – Food Service Systems

FSS 1004 Orientation to Food Service Technology (D) 3 cr.
The student will explore employment opportunities in the food service industry, including job opportunities in hospitals, extended care facilities, restaurants, hotels, motels, fast food operations and private clubs. Emphasis is placed on the analysis and the acquisition of educational and personal competencies required for job success. Three contact hours.

FSS 1100 Menu Design and Food Merchandising (D) 3 cr.
The student will acquire knowledge and demonstrate skills in menu planning, costing and pricing menu items, and designing menu format. Effective merchandising methods in food display, advertising, and interior decorating will be utilized. Positive public relations techniques will be emphasized. Three contact hours.

FSS 1120 Food and Beverage Purchasing (D) 3 cr.
The student will acquire the fundamentals involved in purchasing food and beverages in quantity. Emphasis is placed on standardizing, grading, estimating, selecting, receiving, and storing foods and beverages. Practical application in writing specifications and in developing purchasing techniques is emphasized. Three contact hours.

FSS 1202C Basic Food Preparation (D) 3 cr.
The student will acquire knowledge and skill in the preparation of food including basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. Safety and sanitation practices are emphasized. Five contact hours: three lecture hours; two laboratory hours.

FSS 1221C Quantity Food Production (D) 3 cr.
Prerequisite: FSS 1202C. The student will acquire the principles of quantity food preparation and service for cafeterias, restaurants, and institutions. Major emphasis will be placed on equipment use and care, standardized recipes, portion control, work plans and schedules. Five contact hours: two lecture hours; three laboratory hours.

FSS 1246C Baking (D) 3 cr.
The student will acquire knowledge of the composition and properties of baking ingredients. The proper equipment and tools will be utilized to prepare baked products. Using standardized recipes, yeast breads, quick breads, rolls, pastries, and cakes will be produced in the food service laboratory. The products prepared will be evaluated by established food service standards. Five contact hours: one lecture hour; four laboratory hours.

FSS 1248C Garde-Manger I (D) 3 cr.
The student will acquire knowledge and demonstrate skills in the application of special garde-manger techniques used in ice and tallow sculpturing. Dexterity in the proper use of tools to produce dinner and ice sculptured showpieces will be demonstrated. Four contact hours: two lecture hours; two laboratory hours.

FSS 1249C Garde-Manger II (D) 3 cr.
Prerequisite: FSS 1248C. The student will acquire advanced skills and techniques in the creation of aspic, plinches, chaudfroids, terrines, galantines, and sauces for buffet table arrangements. Emphasis is placed on proper manipulation of tools to produce showpieces. Four contact hours: two lecture hours; two laboratory hours.

FSS 1250 Food and Beverage Service (D) 3 cr.
The student will acquire knowledge of various types of service appropriate to coffee shops, dining rooms, luncheonettes, banquet and buffets. The relationship of menu, equipment, supplies, merchandising and personnel to create good patron acceptance is demonstrated. Three contact hours.

FSS 1251 Restaurant Operation (O) 3 cr.
The basic principles of analysis of food management problems, job analysis methods, selection, control, and supervision of personnel, facilities layout, labor and food cost control, purchasing, legal problems, furniture and decor for clubs, restaurants and related institutions. Three contact hours.

FSS 1304 Management Clinical Practice I (O) 3 cr.
A supervised field experience in which the student will work on the job nine hours per week and apply course theories and skills basic to quality control, including: principles of food preparation, personnel management, sanitation and safety. Ten contact hours: one lecture hour; nine field hours.

FSS 1306 Management Clinical Practice II (O) 3 cr.
Corequisites: FSS 1120 or FSS 2501. A supervised field experience in which the student will work on the job nine hours per week to develop and test competencies in management, food production, cost control data processing, kitchen designs, delivery systems, and merchandising and promotion. Emphasis on report analysis, evaluation, and accounting systems for the food service industry. Ten contact hours: one lecture hour; nine field hours.

FSS 1410 Food Service Equipment/Facility Planning (D) 3 cr.
The student will evaluate the various types of food service equipment relative to cost, structure, function, and maintenance. A layout for a food service operation will be designed to include equipment specifications, energy conservation measures, diversity of function, cost control and consideration toward future adaptability. Three contact hours.

FSS 2300 Supervision and Personnel Management (D) 3 cr.
The student will develop and demonstrate skills necessary to the managerial procedures and functions of a food service operation. Emphasis will be placed on personnel selection, interviewing techniques, supervision, organization, and planning and evaluation. Three contact hours.

FSS 2301 Food Service Delivery Systems (O) 3 cr.
The student will explore food service departments in the varied types of health care facilities and health care delivery systems operating in the United States; their purposes, organization, need in society, general functions and staffing. Facilities such as hospitals, nursing and rehabilitation centers, health maintenance organizations, private and public outpatient clinics and neighborhood health care centers are analyzed and discussed. Three contact hours.

FSS 2302 Management Clinical Practice III (O) 4 cr.
A supervised field experience in which the student will work on the job 12 hours per week to develop and test competencies in employee selection, interviewing, training, evaluation, and budgeting. Thirteen contact hours: one lecture hour; twelve field hours.

FSS 2501 Food and Beverage Control (D) 3 cr.
Presents the basic principles and procedures of effective food and beverage cost control. Includes food and beverage pur-
chasing, receiving, and issuing; calculation of standards, production, planning special control. Three contact hours.

**FSS 2945**  Food Service  
**Internship (D)**  9 cr.  
The student will work on-the-job as an intern under the supervision of qualified personnel in food service establishments within the community. Course theories and skills will be applied in this work experience. The internship training program requires a minimum of twelve weeks for a total of 450 hours. A two-hour classroom seminar will be held bimonthly on campus. Thirty-eight contact hours.

**GEA – Geography: Regional Areas**

**GEA 1000**  World Geography (P)  3 cr.  
An introductory course dealing with humanity's relationship to the natural environment in the various climatic, regional, and economic areas of the world, their interrelationships and problems of conservation of natural resources. Three contact hours.

**GEB – General Business**

**GEB 1011**  Introduction to Business (D)  3 cr.  
An introduction to business organization and procedure, enabling the student to more intelligently pursue advanced business courses and to choose a business career. Three contact hours.

**GEO – Geography: Systematic**

**GEO 2370**  Conservation of Resources (P)  3 cr.  
A survey of natural and human resources of the world. Special emphasis will be placed on the United States with an intensive study of the wise use and wasteful practices in the exploitation and utilization of these resources. Three contact hours.

**GER – German and Germanic Languages**

**GER 1100**  Beginning German I (P)  3 cr.  
This course consists of pronunciation, elements of grammar, simple conversation, exercises, reading, and composition. Visual and auditory aids are employed. Four contact hours: three lecture hours; one unsupervised laboratory hour.

**GER 1101**  Beginning German II (P)  3 cr.  
Prerequisite: GER 1100 or equivalent. A continuation of GER 1100. Four contact hours: three lecture hours; one unsupervised laboratory hour.

**GLY – Geology**

**GLY 1000**  Earth and Space Science (P)  3 cr.  
Prerequisite: None. This course is designed to acquaint the student with the development of science, with the integrating principles and theories in the earth sciences, with the practice of the scientific method, and with a useful knowledge of selected areas of geology, astronomy, and meteorology. Presentation involves lectures, demonstrations, and films. The course is for general education and is not designed essentially as an introductory or preparatory course for any of the specific sciences. Three contact hours.

**GLY 1010**  Physical Geology (P)  3 cr.  
The student will benefit by taking high school algebra or MAT 0024 prior to enrolling in this course. Physical Geology is the study of the earth. Topics covered are structure and land forms, modifying agents, and processes, characteristic rocks and minerals and a brief study of the surrounding atmosphere and the earth as a planet. For majors and non-majors. Three contact hours.

**GLY 1100**  Historical Geology (P)  3 cr.  
Prerequisite: GLY 1010. A study of the geologic history of the earth dealing with the major physical events as recorded in rock formations and with the constantly evolving changes in animals and plants through time. Three contact hours.

**GRA – Graphic Arts**

**GRA 1500**  Theory of Printing Processes (O)  5 cr.  
Prerequisite: None. A lecture course designed to give an introduction to three of the major processes of the printing industry. Typesetting and form makeup (hand and machine composition), lockup and letterpress press operation of cold type and photo typesetting and mechanical art preparation are included in the course. Five contact hours.

**GRA 1502L**  Printing Process Laboratory (O)  4 cr.  
Prerequisite: None. A laboratory course designed to be introduction to and experience in the basic skills of three of the major processes of the printing industry. Typesetting and form makeup (hand and machine), lockup and letterpress press operation, cold type and photo typesetting, and mechanical art preparation are included in the course. Eight contact hours (theory/laboratory).

**GRA 1503**  Theory of Lithographic Processes (O)  5 cr.  
A lecture course designed to give an introduction to the three major processes of the lithographic industry. Negative stripping and platemaking, process camera operation, offset press operation, and related bindery functions are included in the course. Eight contact hours (theory/laboratory).

**GRA 1504L**  Lithographic Processes Laboratory (O)  4 cr.  
A laboratory course designed to give an introduction to an experience in the basic skills of three major processes of the lithographic industry. Negative stripping and platemaking, process camera operation, offset press operation, and related bindery functions are included in the course. Eight contact hours (theory/laboratory).

**GRA 1540**  Layout and Design (O)  3 cr.  
A course designed to teach the technique of preparing layouts that will provide composing room instructions, as well as a comprehensive assimilation of work to be produced, for customer design approval. Constant design concepts will be employed. Three contact hours.

**GRA 1706**  Graphic Arts Estimating (O)  3 cr.  
A lecture course designed to develop the basic technique of estimating the cost of printed matter and its production, from layout to finished product, employing the pricing methods of the industry-accepted Franklin Printing Catalog. Three contact hours.

**GRA 2322L**  Hand and Machine Composition and Form Makeup (O)  3 cr.  
A laboratory course designed to teach the basic technique of setting type by hand and by Ludlow machine, along with form makeup (utilizing metal cutting devices and the broach method of rule form makeup), including the pulling of galley and reproduction proofs. Six contact hours (theory/laboratory).
GRA 2533L Advanced Composition and Makeup (O) 5 cr.
Prerequisite: GRA 2532L. An advanced laboratory course designed to provide for skill development in the hand and machine composition and form makeup process of the printing industry. Emphasis is placed on application of the basic techniques toward greater job complexity, increased quality, and increased productivity. Ten contact hours (theory/laboratory).

GRA 2537L Cold Type Typesetting and Pasteup (O) 3 cr.
A laboratory course designed to teach the basic technique of setting type by strike-on and phototypesetting machines. The composition and preparation of mechanical art forms, pen ruled and machine forms, are included in the course. Six contact hours (theory/laboratory).

GRA 2538L Advanced Cold Type Typesetting and Pasteup (O) 5 cr.
Prerequisite: GRA 2537L. An advanced laboratory course designed to provide for skill development in the operation of strike-on and photographic typesetting equipment and form pasteup. Emphasis is placed on the application of the basic techniques toward greater job complexity, increased quality and increased productivity. Ten contact hours (theory/laboratory).

GRA 2571L Camera Operation and Film Processing (O) 3 cr.
A laboratory course designed to teach the technique of operating the process camera for the reproduction of line and halftone copy negative reproduction, contact printing, preparation of darkroom chemicals, and developing graphic arts, films and papers. Six contact hours (theory/laboratory).

GRA 2573L Advanced Camera Operation and Film Processing (O) 5 cr.
Prerequisite: GRA 2571L. An advanced laboratory course designed to provide for skill development in the operation of the process camera and the development of graphic arts film. Emphasis is placed on the application of the basic techniques toward greater job complexity, increased quality, and increased productivity. Ten contact hours (theory/laboratory).

GRA 2601L Negative Stripping and Offset Platemaking (O) 3 cr.
A laboratory course designed to teach the basic technique of stripping up offset negatives for proper press position, separation for color, and to expose and develop offset press plates. Six contact hours (theory/laboratory).

GRA 2602L Advanced Stripping and Offset Platemaking (O) 5 cr.
Prerequisite: GRA 2601L. An advanced laboratory course designed to provide for skill development in negative stripping and platemaking process of the lithographic industry. Emphasis is placed on application of the basic techniques toward greater job complexity, increased quality, and increased productivity. Ten contact hours (theory/laboratory).

GRA 2630L Letterpress Press Operation and Lockup (O) 3 cr.
A laboratory course designed to teach the basic technique of setting up, operating and maintaining the platen press, the automatic cylinder press. Six contact hours (theory/laboratory).

GRA 2632L Advanced Letterpress Operation and Lockup (O) 5 cr.
Prerequisite: GRA 2630L. An advanced laboratory course designed to provide for skill development in the operation of letterpress presses and form lockup. Emphasis is placed on the application of the basic techniques toward greater job complexity, increased quality, and productivity. Ten contact hours (theory/laboratory).

GRA 2635L Offset Press Operation (O) 3 cr.
A laboratory course designed to develop the basic technique of setting up, operating, and maintaining duplicator and offset presses in the 10x15, 11x17, and 14x20 inch ranges. Six contact hours (theory/laboratory).

GRA 2638L Advanced Offset Press Operation (O) 5 cr.
Prerequisite: GRA 2635L. An advanced laboratory course designed to provide for skill development in the operation of offset duplicators and presses. Emphasis is placed on application of the basic techniques toward greater job complexity, increased quality, and increased job productivity. Ten contact hours (theory/laboratory).

GRA 2945 Practicum (O) 6 cr.
The student will be assigned to a business-industrial setting in a local printing or trade related firm. Here the student will be engaged in the performance of printing specialty duties, functioning under normal production conditions. This course will be directed by the professor. Eighteen contact hours (practicum).

HES – Health, Education and Safety

HES 1000 Personal and Community Health (P) 3 cr.
A study of health problems which are of major importance to our society. Emphasis is placed on drugs, tobacco, alcohol, sex, and general principles involved in our present understanding of health related areas. Three contact hours.

HES 2144 Medical Terminology (O) 2 cr.
Development of a medical vocabulary commonly used in physicians' offices. Emphasis is given to study of physiologic and anatomic terms referring to human tissues and organic systems and the use of medical dictionaries, manuals, and pharmacetical references. Two contact hours.

HES 2400 Standard First Aid and Personal Safety (P) 2 cr.
This course is designed to meet the needs of individuals who have an opportunity to give first aid care frequently within their daily routine and/or special responsibilities. The American National Red Cross Standard First Aid & Personal Safety Certificate is earned upon successful completion of the course. Two contact hours.

HFT – Hotel and Restaurant

HFT 1000 Introduction to Hospitality Management (O) 3 cr.
Introduction to the hospitality industry and management of hotels, motels, and restaurants. An orientation course designed to give the history, organization, problems and opportunities in the hotel, motel and restaurant industry. Three contact hours.

HFT 1250 Hotel/Motel Operation (O) 3 cr.
This course is designed to acquaint the student with the operation of a hotel or motel to include front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage. Three contact hours.
HFT 1270  Apartment Management (O)  3 cr.
This course outlines the procedures to be followed in the day-
to-day problems encountered in the management and opera-
tional effectiveness applied to apartment management. It is
designed to cover all facets of apartment management
including leases, termination, collection forms, mainte-
nance, purchasing, insurance, accounting records, selection
of personnel and agreements, public and human relations
and recreational aspects. Three contact hours.

HFT 1410  Front Office Management-
Hotel/Motel (O)  3 cr.
This course is designed to take the student in successive
stages from an orientation in a hotel/motel front office
through all of the skills needed to manage properly the front
office to the end of having a knowledgeable manager capa-
ble of directing the activities and solving the complex prob-
lems of hotel/motel front office management. It will
acquaint the student with the operation of all the depart-
ments as they apply to the student’s primary responsibility
of selling rooms and serving guests. Three contact hours.

HFT 2221  Customer-Personnel
Relations (O)  3 cr.
This course explores the various successful techniques
involved in establishing effective communications and func-
tional relationships with the customer and personnel at all
levels. Three contact hours.

HFT 2700  Tourism (O)  3 cr.
Prerequisite: HFT 1000. Tourism, which is travel, is defined
as including the whole hospitality field – hotels, motels,
resorts, restaurants, camping and all the supportive ser-
sices for travelers and vacationers. This course is designed
to develop an understanding of the travel modes and to make
the student knowledgeable and responsive to the develop-
ments and the economic approaches that are necessary in
order to become a travel manager. Three contact hours.

HFT 2941  Internship (O)  3 cr.
On-the-job work experience supplied by the hotel, motel and
restaurant industries, job placement will be dependent
upon the student’s preference and availability of participat-
ing hospitality institutions. The course consists of 15 hours
per week of on-the-job instructions accompanied by one sem-
inar each week. Students employed in the industry will be
paid the on-going rate for part-time help. Fifteen contact hours;
one lecture hour, four-teen field hours.

HFT 2942  Internship (O)  3 cr.
Prerequisite: HFT 2941. This course is an extension of HFT
2941. It consists of on-the-job work experience supplied by
the hotel, motel, and restaurant industries. Job placement
will be dependent upon the students’ preference and avail-
ability of participating hospitality institutions. The course
consists of 15 hours per week of on-the-job instruction
accompanied with one seminar each week. Students
employed in the industry will be paid the on-going rate for
part-time help. Fifteen contact hours: one lecture hour; four-
teen field hours.

HHD 1122  Housing Alternatives (O)  3 cr.
This course includes a study of selection of housing and fur-
nishings, housing values, needs, renting, buying a home,
and characteristics of and plans for desirable housing. It
emphasizes selection and arrangement of furnishings
through the use of color principles and elements of design.
Three contact hours.

HHD 1232C  Functions and Psychology
of Space (O)  3 cr.
Prerequisite: HHD 1001C. Social, private and work spaces
will be analyzed for psychological use of space, efficiency of
traffic patterns, and effectiveness of design. The student
will read, evaluate, modify, and execute a floor plan based
upon the requirements for the space zones. Exploration of
the multiples of background modifications for visual impact
on the total design of an interior space will be addressed.
Four contact hours: two lecture hours; two laboratory hours.

HHD 1360C  Construction of Window
Treatments and
Drapery (O)  3 cr.
Instruction in this course program includes competency
development relating to aspects: identification, use and care
of tools and equipment; and construction of window treat-
ments and valances. A special emphasis is placed on con-
struction and installation techniques. Instruction and prac-
tice on all commercial drapery equipment is stressing
during the course. Six contact hours: two lecture hours; four
laboratory hours.

HHD 1362  Window Treatment
Design (O)  3 cr.
This course includes a study of types of windows and variety
of treatments for each. Special emphasis is placed on energy
savings related to window types, fabric selection and treat-
ment choice. Course work incorporates information on the
selection and installation of hardware and rods for each
treatment. Three contact hours.

HHD 1365C  Home Accessories
Construction (O)  3 cr.
This course covers designing and executing home accessory
projects and restoration of discarded accessories and use of
alternate materials. Extensive course work is focused on
preserving and restoring collectibles for the home, as well as
construction of new items worthy of being called collect-
ibles. Six contact hours: two lecture hours, four laboratory
hours.

HHD 1450C  Fundamentals of Restoration
and Preservation (O)  3 cr.
The course content is directed towards making the individ-
uals better able to preserve existing features inside and out-
side of the home. Choices in what to restore vs. what to
preserve are explored in supervised experiences. Hands on
practice in developing restoration and preservation skills is
included. Six contact hours: two lecture hours, four labora-
tory hours.

HHD 1452  Home Maintenance and
Repair (O)  3 cr.
The course content and instruction are directed toward
making the home owner self-sufficient in handling minor
care, repair, and maintenance problems. The content
includes problems with electric power, plumbing emergen-
cies, care and repair of floors and floor coverings, interior
painting, wallpapering, furniture care and repairs, and mis-
cellaneous repairs. Tools needed, work safety, and combat-
ting pests and fungi will also be discussed. Opportunities for
laboratory experiences in practical applications will be pro-
vided. Three contact hours.

HHD – Housing and Home Design

HHD 1001C  Principles of
Interior Design (O)  3 cr.
The course content includes an in-depth study of the ele-
ments and principles of design. The course is designed to
demonstrate a proficiency in the knowledge and application
of the elements – color, line, texture, ornament, shape,
space – as well as the principles – scale and proportion,
balance rhythm, emphasis, and unity – in designing inte-
rior spaces. Employment opportunities will be explored.
Four contact: two lecture hours; two laboratory hours.
HHD 1500 C Decorating With Slipcovers (O) 3 cr.
The course work includes instruction for homemakers in fabric selection, techniques of handling various fabrics, making cord, fitting cord to corners, and inserting zippers. The care of slipcovers is also included. Six contact hours: two lecture hours; four laboratory hours.

HHD 1510 C Introduction To Upholstery (O) 3 cr.
This course includes selection of tools, materials, and equipment; use of power equipment, dismantling of furniture; basic construction processes; fitting the muslin cover; planning and preparing the fabric platform cover; planning and preparing panels, outside and trimmings; pleated skirts, dust ruffles and making cushions. An emphasis is placed upon experiencing all phases of upholstery construction useful in a variety of home furnishings projects. Six contact hours: two lecture hours; four laboratory hours.

HHD 1511 C Advanced Upholstery (O) 3 cr.
This course is designed to enhance skills and to develop more productive work habits. This course includes channeling, tufting, making skirts, repairing, and spot touching up of furniture, color and color schemes, and headboards. A special emphasis is placed upon authentic restoration of antiques and classic furniture styles. Six contact hours: two lecture hours; four laboratory hours.

HHD 2234 C Residential and Commercial Design (O) 3 cr.
This laboratory course is designed to provide skill development in planning residential and commercial interiors from blueprints to the final assembly of all furnishings. A study of commercial furnishings, fabrics, building codes and fire regulations is emphasized. Working drawings, specifications, and competency in budgeting will also be synthesized. Four contact hours: two lecture hours; two laboratory hours.

HHD 2240 Why Preservation? (O) 3 cr.
This course is designed to study the process of a restorable home, planning interior and exterior renovations, estimating costs, choosing contractors, doing it yourself, getting involved in local preservation groups. A special emphasis is placed on the development of the community, historically, socially and architecturally as well as the trends in zoning, crime, transportation and commercialization. Three contact hours.

HHD 2323 C Perspective Renderings – Housing (O) 3 cr.
Emphasis is placed on planning and executing renderings, and the techniques of one and two point linear perspective as they apply to interior space and its furnishings. In this introductory course, the student will develop skills in graphically conveying design concepts into visual illustrations. Four contact hours: two lecture hours; two laboratory hours.

HHD 2324 C Graphic Presentation Techniques (O) 3 cr.
Professionalism of graphic illustration is the focus of this course. Various media for graphic interior design presentations will be explored, such as, pencil, pen and ink, and watercolor renderings. Student projects will also provide experience in assembling and presenting collages. Four contact hours: two lecture hours; two laboratory hours.

HHD 2600 Architectural Style: Exteriors and Interiors (O) 3 cr.
This course includes a comparative analysis of home architectural interiors and exteriors based on elements of home design recognizable in home construction. A study of antique, reproduction and modern exteriors is also included. Emphasis will be placed on consequences of prior and future preservation of the structures studied. Three contact hours.

HHD 2805 Professional Practices In Home Economics (O) 3 cr.
This course includes a study of small business organizations and practices in interior design, home furnishings, and clothing related industries. A special emphasis is placed upon practical solutions to common problems found in these related trades. The process of selling fabric, etc., labor estimates, sub-contracting services, specialization of labor within the business, and customer relations will be explored extensively. Three contact hours.

HHD 2810 Marketing Techniques For The Interior Designer (O) 3 cr.
Utilization of marketing techniques in selling interior design materials is the focus of this course. Based on providing consumer information to the client, the student will plan and execute marketing strategies utilizing visual aids and display areas. Three contact hours.

HHD 2943 Practicum In Economic Revitalization Of Homes And Business Dwellings (O) 6 cr.
A minimum of 20 hours per week of practical work experience approved by the student's advisor. The student will acquire on-the-job experience in housing preservation, restoration or construction under the supervision of qualified personnel within the business community. Twenty contact hours: one lecture hour; nineteen field hours.

HIS – General History

HIS 1907 Honors Survey of History (P) 3 cr.
Prerequisites: Outstanding performance in AMH 2010, 2020; EUH 1000, 1001; recommendation by the Department. An independent survey in one or more selected fields of history which incorporates extensive research and in-depth readings. Designed to develop interest and skill in the preparation of historical analysis and presentation in anticipation of further studies at the senior college level in history or related fields. Three contact hours.

HME – Home Management and Equipment

HME 1200 Home Management (D) 3 cr.
The student is introduced to problems in Home Management, including: values and goals in the management process; the efficient use of time, money and human resources; and earning and spending the family income. The student is given a decision-making orientation in order to sharpen problem solving skills in managing home and physical resources. Three contact hours.

HME 1232 Economic Home Energy Sources (O) 3 cr.
This course is an overview of the conventional and nonconventional energy sources in the home. Opportunity is provided for the homeowner to gain an understanding of billing, metering, and ways of controlling personal energy consumption. A review of building structures and the potential energy use, improvements needed to the building envelope to make it energy efficient, and cost of energy for the structure is also a part of the instruction provided. Three contact hours.

HME 1312 Home Equipment - Selection, Use, And Care (O) 3 cr.
Instruction in this course includes all phases of equipment selection, use, and care. The student will have the opportunity to consider factors influenced by energy costs, space requirements, lifestyle, number of people using the dwelling, and budget limitations. A special emphasis is placed upon fuel choices and equipment types to better utilize existing systems in an older home. Three contact hours.
HOS – Horticultural Science

HOS 1010C  Basic Applied Horticulture (P)  4 cr.
A practical study of the principles of plant culture including greenhouse and garden experiences with both ornamental and food plants. Plans appropriate for and problems peculiar to North Florida horticulture are emphasized. Laboratory fee $6.00. Six contact hours; three laboratory hours.

HSC – Health Science

HSC 2802  Death Attitudes – Exploration and Change (D)  3 cr.
An exploration of the psychological, philosophical, and sociological aspects of death and dying, especially in relationship to the negative view of death in our American Society. This course will encourage participants to analyze life’s true meaning by coming to terms with death as a part of human development. The field experience in this course will require contact with the terminally ill patient. This course is limited to students enrolled in health-related programs. Four contact hours (lecture/lab).

HUM – Humanities

HUMA 1740  Overseas Humanities I (P)  3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. The first half of a humanities course offering students a study/travel program centered around the cities and countries of the tour. The course will include field experiences, lectures, discussions, and other experiences in the humanities area. The student will visit great European cities where special attention will be given to forces contributing to the culture of these nations. The student will gain an understanding and appreciation of great and vital ideas through on-site study within the literature, architecture, philosophy, and religion in the cultural heritage of Western civilization. This course includes reading and writing competencies. Three contact hours.

HUMB 1740  Overseas Humanities II (P)  3 cr.
The second half of a humanities course offering students a study/travel program centered around the cities and countries of the tour. The course will include field experiences, lectures, discussions, and other experiences in the humanities area. The student will visit great European cities where special attention will be given to forces contributing to the culture of these nations. The student will gain an understanding and appreciation of great and vital ideas through on-site study within the political, economic and social historical framework in art, music, literature, architecture, philosophy and religion in the cultural heritage of Western civilization. This course includes reading and writing competencies. Three contact hours.

HUM 2211  Humanities: The Foundations (P)  3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. Life and creative expressions from their origins in early cultures of the Mediterranean regions through medieval Europe as surveyed through the visual arts, music, literature, philosophy, and social history. The course examines the interaction of cultural experiences that developed and were passed on to later peoples. This course provides a basic foundation for study of all humanities courses and includes reading and writing competencies. Three contact hours.

HUM 2231  Humanities: Renaissance to the Romantic Period (P)  3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. Life and creative expressions in Europe from the Medieval/Renaissance to the modern world as surveyed through the interrelationships of the visual arts, music, literature, philosophy, and social history. The course provides transition between the study of the early and the modern cultures focusing on the European Renaissance, Enlightenment, Napoleonic Era through the Early Romantics as they relate to other world developments. The course includes reading and writing competencies. Three contact hours.

HUM 2250  Humanities: The Modern World (P)  3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. Life and creative expression of Western culture in its relationship with other world cultures as surveyed through social history, the impact of science and technology on human values and the history of ideas manifested in the arts and letters from the nineteenth century Romantic Movement to the present. The course includes reading and writing competencies. Three contact hours.

HUM 2410  Humanities in Asia (P)  3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. Asian cultures and their creative expressions as surveyed through the media of visual arts, music, literature, and philosophic thought. The course includes reading and writing competencies. Three contact hours.

HUM 2450  Humanities in the Americas (P)  3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. Life and creative expressions in the Americas as surveyed through the media of visual arts, music, literature, philosophy and social history. The course includes reading and writing competencies. Three contact hours.

HUM 2460  Latin American Humanities (P)  3 cr.
Life in the Latin American countries surveyed from its beginning to the present. Creative expressions in the visual arts, music, literature and philosophic thought will be studied in the context of archaeology, anthropology, sociology, history, geography and religion. Three contact hours.

HUM 2470  Intercultural Survey (P)  1 cr.
This course is a survey, through the humanities, of human nature and society within a specified cultural setting as a means of understanding other cultures and their problems. Cultures will vary. This course may be repeated for credit four times when cultural setting is changed, but may not be taken within the same cultural setting as HUM 2472. One contact hour.

HUM 2472  Intercultural Explorations (P)  3 cr.
Prerequisite: ENC 1101. This course is a study of human nature, human society, and human rights in a specified cultural setting through the humanities, religion, drama, music, dance, the visual arts, myths and legends, and their place in affecting social policies and a culture’s vision of its future. Cultures will vary. This course includes reading and writing competencies. This course may be repeated for credit three times when cultural setting is changed. However, it can satisfy only three hours in Humanities, Category B of the General Education Requirements. Additional courses, if taken, must stand as electives only. HUM 2472, Greece; HUM 2472, China; HUM 2472, Middle East; HUM 2472, Japan.) Three contact hours.

HUM 2478  Northern European Humanities (P)  3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. Life and creative expressions from their origins in early cultures in Northwestern Europe through the Baroque period as surveyed through the visual arts, music, literature, philosophy, and social history. The course examines the interaction of cultural experiences that created the
HUM 2710  Fine Arts Field Trip (P)  1 cr.
This course involves a cultural enrichment tour of New York City or other localities and is designed as a supplement for students currently enrolled in one or more Fine Arts courses. The trip will include visits to art galleries, museums, and musical and dramatic productions. A paper based on a cultural aspect, or aspects, of the trip is required. Such paper will be due one month from the return date of the trip. Orientation material will be presented to the students well in advance of the trip, and topics for a paper will be discussed and arranged before leaving. One contact hour.

HUN – Human Nutrition

HUN 1001  Principles of Nutrition (D)  3 cr.
The student will acquire the basic principles of nutrition and develop skills in applying the recommended dietary allowances to all age groups. Emphasis is placed on key food nutrients, consumer information regarding food economy, quality food purchasing, and maximum nutrition for the life cycle. Three contact hours.

HUS – Human Services

HUS 1001  Introduction To Human Services (D)  3 cr.
This course includes a discussion of the field of community and human services including gerontology, abuse care, mental health, recreation, rehabilitation, retardation, and social welfare. Emphasis is given to the diversity of the human services delivery system in the USA, communities as networks of service organizations, the variety of human service consumers, and the skills needed for effective human services. Three contact hours.

HUS 1303  Techniques In Human Service Delivery (D)  3 cr.
In this course, the student will have the opportunity to acquire background knowledge of human service agencies and to develop skills basic to individual and group therapy. Areas to be addressed will include the following: theories of counseling and personality, the interviewing process and interviewing skills, and issues and problems of daily life. Self-awareness and personal growth necessary to effectively practice helping relationship skills will be stressed. Class topics will also include issues concerning specific client populations, such as aging, mental health, retardation, social welfare, and abuse. Three contact hours.

HUS 1600  Topics in Human Service Delivery (D)  3 cr.
The focus of this course will be upon an in-depth study of community human service agencies and the human service delivery systems in which they operate. The relationships of these to government legislation, and resources, and resource allocation will be covered. Discussions of current issues and trends in the fields of mental health and human services will also be included. A portion of each student's time will be spent in a field experience at a community agency. Six contact hours: one lecture hour; five field hours.

IDS – Interdisciplinary Studies

IDS 1935  Interdisciplinary Studies Seminar (P)  1 cr.
The IDS seminar provides a structured opportunity for students and professors to participate in special programs, to work together in the development of IDS projects, and to interact in an interdisciplinary environment. May be repeated. Two contact hours.

IEA – Industrial Education

IEA 1305  Industrial Survival Procedures (O)  3 cr.
A course designed to teach basic fundamentals of first aid, fire prevention and methods of containing fires until professional fire fighters or disaster personnel arrive. Topics to include: methods to be implemented with minor/major accidents or illness, evacuation procedures; property protection methods, fire/explosion handling procedures. Special emphasis will be placed on methods of orderly employee conduct and preventing panic. Three contact hours.

IND – Interior Design

IND 1010  Housing and Interior Design (O)  3 cr.
This course includes a study of selection of housing and furnishings, housing values, needs, renting, buying a home, and characteristics of and plans for desirable housing. It emphasizes selection and arrangement of furnishings through the use of color principles and elements of design. Three contact hours.

IND 1100  History of Interiors I (O)  3 cr.
The student will acquire the ability to identify furniture styles, architectural details, and ornamental motifs from the time of our primitive beginnings through the Renaissance period. Three contact hours.

IND 1130  History of Interiors II (O)  3 cr.
Prerequisite: IND 1100. The student will acquire the ability to identify furniture styles, architectural details, and ornamental motifs from the Renaissance period through the twentieth century. Three contact hours.

IND 1420  Materials and Sources (O)  3 cr.
This course includes a study of the materials of interior design and sources of each. Topics include textiles, floor and wall coverings, furniture, window treatments and accessories. Special emphasis will be given to customer relations and providing product information to the consumer. Three contact hours.

IND 2940  Interior Design Internship and Seminar (O)  6 cr.
The student will work on the job as an intern under the supervision of qualified personnel in interior design firms within the community. Course theories and skills will be applied in this work experience. The internship training program requires 15 weeks for a total of 300 hours. A two-hour classroom seminar will be held bimonthly on campus. Permission of program director is required for enrollment in this course. Twenty-one contact hours: one lecture hour; twenty field hours.

INR – International Relations

INR 2002  International Relations (P)  3 cr.
A study of the nature of the international political system with emphasis on the concepts of national interest and power with respect to the relations of nation-states; examination of the function and role of international organizations. Three contact hours.

ISC – Interdisciplinary Science – Natural

ISC 1000  Unified Science (P)  3 cr.
This course is designed to allow students to study selected topics relating to processes of science, concepts of science,
natural phenomena, and/or current problem areas. Selected topics will be studied in terms of their relationship and significance to the various science disciplines. This course is not designed essentially as an introductory or preparatory course for any specific physical science emphasis. Three contact hours.

**JOU – Journalism**

**JOU 1001** Introduction to Journalism (P) 3 cr.
An introduction to Journalism and Mass Communications. This course will include the history and development of journalism with emphasis on newspaper, radio, television and magazines. Effective personal communications will also be taught as the basis of effective mass communications. Three contact hours.

**LAH – Latin American History**

**LAH 2000** History of the Americas (P) 3 cr.
A study of the nations of the Western Hemisphere, including Canada, from colonial times to the present with emphasis on Latin America. Three contact hours.

**LEI – Leisure**

**LEI 2330C** Camp Counseling (P) 3 cr.
A course designed to develop leadership qualities for working with young people in a recreational situation and also to provide knowledge and skill necessary for living in, enjoying, and preserving the out-of-doors. The American Camping Association Advanced Campcraft certification is earned upon successful completion of the course. Three contact hours, and two overnight camping trips.

**LIS – Library Sciences**

**LIS 2001** Use of Books and Libraries (P) 1 cr.
Organization of the FJC Learning Resources. Introduction to the library's classification system, how to use the card catalog, periodical indexes and other basic indexes. Suggestions for notetaking. Emphasis will be placed upon developing an analytical and systematic approach to the use of reference sources. This course will be helpful to all students who wish to make better use of library facilities at FJC, universities and public libraries. Three contact hours (lecture/ activity).

**LIT – Literature**

**LIT 2000** Introduction to Literature (P) 3 cr.
Prerequisite: ENC 1102. Emphasis on reading selections for understanding and appreciation. Consideration is given to the major literary forms and their distinctive characteristics and conventions, principal literary themes, and different critical approaches. Designed both for increasing personal satisfaction in literature and as preparation for further literary study. Three contact hours.

**LIT 2100** Great Ideas in World Literature (P) 3 cr.
Prerequisites: ENC 1101 or satisfactory score on placement test. This course surveys universal themes and ideas in representative masterpieces on the world's literary traditions from ancient times into the twentieth century. The selections in translations reflect man's perennial search for meaning in attempting to define relationships to self, society, and the universe. This course includes reading and writing competencies. Three contact hours.

**LIT 2330** Children's Literature (P) 3 cr.
Chronological survey of literature for children ages one to twelve, organized by format, subject, reading and interest levels. Reading, selection and evaluation of materials, sources of materials, and use of materials with children. Three contact hours.

**LIT 2370** The Bible as Literature (P) 3 cr.
A study of the development of the Bible in both its natural and its supernatural aspects, its influence on literature and humanity. Emphasis on the Bible's role in the modern world. Three contact hours.

**MAC – Mathematics: Calculus and Pre-calculus**

**MAC 1104** College Algebra (P) 4 cr.
Prerequisite: MAT 1033 with a grade of C or better; or a satisfactory score on placement test. In this course techniques of algebra are studied with an emphasis on exact vocabulary. An analysis of the real number system is introduced and topics on linear and quadratic functions, systems of equations and inequalities, logarithms, theory of polynomials and matrices are included. This course is recommended for students who need more preparation for trigonometry and calculus. Four contact hours.

**MAC 1114** College Trigonometry (P) 3 cr.
Prerequisite: MAC 1104, with a grade of C or better. This course treats trigonometric functions of angles and vectors. It includes identities, inverse circular functions, solution of trigonometric equations, complex numbers, and solutions of triangles. Three contact hours.

**MAC 1311** Calculus with Analytic Geometry I (P) 4 cr.
Prerequisite: MAC 1114 or two years of high school algebra, one year of plane geometry, one-half year trigonometry. A course designed for the major in mathematics, science or engineering, having a good foundation in algebra and trigonometry but no analytic geometry. This is an integrated differential and integral calculus course with analytic geometry and places emphasis upon the theoretical approach to mathematical analysis. Covered in the course are an introduction to analytic geometry, differentiation of algebraic expression with applications of the derivative and integration involving algebraic expressions with applications. Four contact hours.

**MAC 2312** Calculus with Analytic Geometry II (P) 4 cr.
Prerequisite: MAC 1311. A continuation of the calculus-analytic geometry sequence. The course includes differentiation and integration of transcendental functions, plane analytic geometry topics, methods of integration and the algebraic calculus of vectors in the plane. Four contact hours.

**MAC 2313** Calculus with Analytic Geometry III (P) 4 cr.
Prerequisite: MAC 2312. A continuation of the calculus-analytic geometry sequences. Topics include indeterminate forms, improper integrals, polar coordinates, infinite series, solid geometry and its vectors, partial differentiation, and multiple integrals. Four contact hours.

**MAN – Management**

**MAN 2021** Principles of Management (D) 3 cr.
A detailed analysis of the management functions of planning, organizing, staffing, directing and controlling as
related to business enterprise. The orderly presentation of fundamental knowledge in management provides the student with the framework for further study in the field, or the background for practical application of management principles in business and industry. Three contact hours.

**MAN 2050 Transportation Management and Theory (D)** 3 cr.
This course is primarily designed for students advancing to the management stage in the transportation field. It covers financial management, business law, management's relation to government, marketing management, management theory and philosophy, and broad management perspective. Three contact hours.

**MAN 2300 Personnel Management (D)** 3 cr.
Problems, practices and policies in the management of people. Leadership, motivation and direction of employees towards management-employee-oriented goals. Employment practices. Three contact hours.

**MAN 2800 Small Business Management (D)** 3 cr.
This course is designed for the student who is primarily interested in the ownership and management of the small business enterprise. The managerial function of planning, organizing, staffing, direction and controlling as applied to the small business is examined and analyzed. Retailing, wholesaling, manufacturing, and service type business organizations are studied. Three contact hours.

**MAP – Mathematics: Applied**

**MAP 2302 Differential Equations (P)** 3 cr.
Prerequisite: MAC 2312. A study of the procedure and the theory of various methods of solving ordinary differential equations, which includes a development of Laplace Transforms and applications. Three contact hours.

**MAR – Marketing**

**MAR 1011 Principles of Marketing (D)** 3 cr.
Prerequisite: GEB 1011. The study of matching products of markets. Discussion of basic marketing functions. Emphasis is placed on those interacting determinates of demand which make up the marketing environment — the economic, psychological, sociological, and political factors. The legal restraints that make up the forces beyond management control, but are needed in the marketing decision-making process, are introduced. Three contact hours.

**MAR 1101 Salesmanship (D)** 3 cr.
An introduction to the art of effective salesmanship. An analysis of types and problems of psychology of sales situations. Buying motives, customer approach, and sales techniques are studied. Three contact hours.

**MAR 1151 Retail Merchandising (O)** 3 cr.
The functions of the merchandising department, inventory control systems, stock turnover, the buying function, and sales promotions are covered. Also covered are appliances, furniture, household accessories, and other display techniques. Three contact hours.

**MAR 1301 Sales Promotion (O)** 3 cr.
Designed for all types of sales personnel, covers basic methods and techniques used in sales promotion program developments, research advertising, merchandising, display, direct mail advertising, development of effective sales talks, and demonstrations. Three contact hours.

**MAR 2131 Principles of Purchasing I (O)** 3 cr.
A comprehensive course in modern procurement practices and policies used by practicing purchasing agents. Column analysis of the fundamental purchasing principles with analytical descriptions of the latest developments and techniques. Three contact hours.

**MAR 2132 Principles of Purchasing II (O)** 3 cr.
A continuation of MAR 2131 with emphasis on quality assurance, price analysis, planning and forecasting, buying capital equipment. Three contact hours.

**MAR 2221 Principles of Wholesale Distribution (O)** 3 cr.
This course is a general survey of the wholesaling functions for the student contemplating a career in the wholesale distribution industry. The place of wholesale distribution in relation to producers, retailers, institutional and industrial customers, and individual consumers is examined. Special attention will be given to the role of the wholesale distributor in the channels of distribution; the place of land, sea, and air carriers; and career opportunities at the state and national level. Three contact hours.

**MAR 2240 Principles of International Trade: Export-Import (D)** 3 cr.
This course is designed to provide training for entrance into the export-import business. It will cover three major areas: (1) the role of transportation, (2) international markets, and (3) preparation of forms for customs duties, taxes, and related documents. Three contact hours.

**MAR 2401 Sales Management (O)** 3 cr.
Prerequisite: MAR 1011. Principles and concepts underlying the organization, operation, and control of a sales force. Topics such as the selection of personnel, recruiting, compensation plans, supervision, evaluation, and stimulation of sales programs are covered. Three contact hours.

**MAT – Mathematics: General**

**MAT 0003 General Mathematics** 4 cr.
This is a course in mathematical computation skills including fractions, decimals and percents, the metric system, formulas and practical mathematical applications. Individualized, self-paced practice in specific skills is provided through laboratory work. This course does not apply toward the associate degree. Five contact hours; three lecture hours; two laboratory hours.

**MAT 0024 Elementary Algebra** 3 cr.
Prerequisite: Satisfactory score on placement test. The emphasis of this course is on fundamental concepts and structures with manipulation as a tool for reinforcement. The content includes topics on sets, basic operations with real numbers, basic operations with polynomials, solving linear equations, and factoring polynomials. This course does not apply toward an associate degree. Three contact hours.

**MAT 1033 Intermediate Algebra (P)** 3 cr.
Prerequisite: MAT 0024, or a satisfactory score on placement test. This course is designed for students who need to take either MAC 1104 or MGF 1104. Topics include an introduction to the mathematics of sets, operations with polynomials, rational exponents and radicals, solutions of linear and quadratic equations and their applications, solutions, solutions of linear inequalities, introduction to relations and functions, and systems of equation and inequalities. Three contact hours.

**MCB – Microbiology**

**MCB 2013C Microbiology (P)** 4 cr.
Prerequisites: CHM 1020, 1040C, or 1045C. High school chemistry. In addition, the student will benefit by taking APB 1150 or BSC 1011C prior to enrolling in MCB 2013C. A
study of the protista, viruses, rickettsias, and achizomyocytes of medical and economic importance. Laboratory exercises introduce bacteriologic techniques and aseptic procedures using non-pathogenic organisms. Six contact hours: three studio hours; three clinical hours.

**MET – Meteorology**

MET 1001  Meteorology (P)  3 cr.
A course designed to meet the general education requirements in the Natural Science area. Includes the phenomena of weather and climate and the use of atmospheric data to predict the weather. Three contact hours.

**MGF – Mathematics:**

**General and Finite**

MGF 1204  College Mathematics (P)  3 cr.
Prerequisite: MAT 1033 or a satisfactory score on placement test. This is a survey course which includes topics in mathematical logic, set symbolism and terminology, probability and statistics, computer literacy, geometry, and measurements. Three contact hours.

**MIS – Military Science**

MIS 1000  Introduction to the Army as a Profession (P)  1 cr.
This course introduces students to military science and the organizational approach to leadership. Military topics will include first aid, communication, and introductory map reading. The leadership portion will include the leader's responsibilities, the problem-solving process, basic traits of a leader and counseling techniques. The first aid portion will cover the four lifesaving steps, mouth-to-mouth resuscitation, treatment of an open and closed fracture, stopping arterial bleeding, and treatment for shock. Introductory map reading will include the use of a map, the grid system, and identification of major terrain features. One contact hour.

MIS 1020  Organization of the Army and ROTC (P)  1 cr.
This introductory course outlines the organization and mission of the Army, Army Reserve, National Guard and Reserve Officer Training Corps. Special emphasis is placed on the different branches of the Army, the Officer Personnel Management System and the benefits of a commission in the active Army, Army Reserve or National Guard. Discussions include the role of the Army Officer, the non-commissioned officer, and the relationship between these two positions. The course also examines the customs and traditions of the service with emphasis on basic military courtesy. One contact hour.

MIS 2601  Map Reading and Land Navigation (P)  1 cr.
Prerequisite: MIS 1000. This course is an in-depth study of map reading, which includes use of the grid system, identification of terrain features, elevation and relief, use of the grid-magnetic angle, measuring distance both on the ground and map sheet, use of a back azimuth, polar coordinates, intersection, resection and modified resection. Students also will receive practical work with the Lensenic compass, including techniques for both day and night use. One contact hour.

MIS 2610  Military Training Management (P)  1 cr.
This course is designed to develop an understanding of the fundamental concepts involved with methods of instruction, training management, and curriculum development in the military. Basic concepts will be covered in the use of a lec-

ture, conducting a conference and presenting a demonstration. Case studies from US military history and basic first aid will be used for student prepared classes. Students will become familiar with and be required to prepare a lesson plan for all presentations. One contact hour.

**MKA – Marketing Applications**

MKA 1303  Retail Practicum (O)  3 cr.
Occupational experiences are provided with cooperating businesses. Fifteen contact hours per week (practicum).

MKA 1313  Retail Practicum (O)  3 cr.
A continuation of MKA 1303. Fifteen contact hours per week (practicum).

**MLS – Medical Laboratory Science**

MLS 1010C  Hematology (D)  6 cr.
Given instruction in the theories and techniques of hematology, the student will develop accuracy and precision in hematologic technique. The learner will identify and count the formed elements of the blood, assay blood for coagulation factors, state reference values for hematologic techniques, classify and categorize blood diseases, and recognize and recall the application of hematologic procedures to clinical diagnoses. Eight contact hours (lecture/laboratory).

MLS 1022C  Introduction to Health Technology (D)  3 cr.
The course is designed to enable the student to master basic mathematical concepts, medical laboratory ethics, and basic medical laboratory techniques. Given instruction in integrated health sciences and their application to clinical laboratory science, the student will practice the manipulative skills of medical laboratory technology. Four contact hours (lecture/laboratory).

MLS 1400C  Medical Microbiology (D)  6 cr.
Given instruction in the theories, taxonomy and techniques of medical bacteriology, parasitology and mycology, the learner will perform step-by-step microbiological techniques precisely and accurately. The student will isolate and identify microorganisms from clinical specimens, will classify the organisms associated with disease in man, perform sensitivity tests and correlate this information for its application to clinical diagnoses. Eight contact hours (lecture/laboratory).

MLS 2530C  Serology and Blood Banking (D)  6 cr.
Prerequisite: MLS 1010C. Presented basic principles, theories and related serologic methods, the student will perform techniques precisely and accurately, will state the principle and serologic reference values of each and relate test results to clinical diagnoses. Presented the concepts of immunohematology, the student will practice the technical methods and procedures of blood banking and recognize their application to patient care and blood transfusion. Eight contact hours (lecture/laboratory).

MLS 2600C  Principles of Clinical Instrumentation (D)  5 cr.
Corequisite: MLS 2602. Given instruction in the principles of anaytic methodology and the principles of clinical instrumentation, the learner will apply this information to the procedures of medical laboratory technology in the clinical phase of the student's education. Five contact hours.

MLS 2610C  Clinical Chemistry (D)  6 cr.
Presented the basic concepts and techniques of clinical chemistry, the student will develop the technical competencies required to analyze body fluids accurately and precisely. The learner will relate the results of chemical
measurements to the assessment of the body's metabolic state. Eight contact hours (lecture/laboratory).

**MTR – Metal Trades**

**MTR 1001 Blueprint Reading for Welders (O)** 3 cr.
Corequisite: MTR 1120. A course designed to provide the student with a basic understanding of the function of blueprints as they relate to welding and fitting structural assemblies; includes topics on welding symbols, orthographic projection, shop mathematics, measurement, scale, tolerance, set-up tools, and their application. Three contact hours.

**MTR 1002 Production Blueprint Reading (O)** 3 cr.
This course is designed to teach blueprint reading in a competency based program of 37 prints. These prints include assembly drawings of precise machine parts which require a number of machining operations. They provide practice in blueprint reading and illustrate the various elements of blueprints. Special emphasis is given to shop safety. Three contact hours.

**MTR 1004 Machine Bench Work (O)** 4 cr.
This course is designed to teach the manipulation of materials, tools, drawing, and equipment. Special emphasis is given to shop safety procedures on the methods to use materials, tools, and equipment. Eight contact hours (theory/laboratory).

**MTR 1100 Welding For Related Trades (O)** 4 cr.
A course for students not enrolled in a welding program. This course is designed to provide the student with a basic introduction to those welding skills used in related trades. It is designed to provide the student with a practical understanding of welding safety, arc welding fundamentals, oxyacetylene welding fundamentals, oxyacetylene cutting skills, brazing, and silver soldering. In-class practice is stressed to develop the skills necessary to produce quality welds in the flat position on mild carbon steel. Eight contact hours (theory/laboratory).

**MTR 1120 Basic Shielded Metal-Arc Welding (O)** 4 cr.
Corequisite: MTR 1001. A course designed to provide the student with a practical understanding of arc welding fundamentals, welding safety, arc welding power sources, arc welding electrode classifications and selection. Special emphasis, through instructor demonstrations as well as student in-class practice, is placed on developing the manual arc welding and oxyacetylene cutting skills necessary to produce high quality welds in all welding positions on mild carbon steel from 16 gauge to 1/4” plate. Eight contact hours (theory/laboratory).

**MTR 1121 Advanced Shielded Metal-Arc Welding (O)** 4 cr.
Prerequisite: MTR 1120 or demonstrated ability to satisfactorily complete the terminal objectives of MTR 1120. A course designed to provide the student with a thorough technical understanding of arc welding fundamentals, safety procedure and operation qualification, destructive and non-destructive testing, as well as metals identification. Welding related information is included on arc welding and oxyacetylene cutting as well as procedures for welding cast iron and surface of steel. Special emphasis through instructor demonstrations as well as student in-class practice, is placed on developing the manual arc welding skills necessary to make high quality shielded metal arc welds in all positions on low carbon steel, 3/8” plate, multiple pass butt welds and 1” plate lap joints. Joint designs and welding techniques used are those that will provide a foundation for pipe shielded arc welding training. Eight contact hours (theory/laboratory).

**MMC – Mass Media Communications**

**MMC 2100 Writing for Mass Communications (P)** 3 cr.
Prerequisite: ENC 1101. A communications course designed to provide fundamental instruction and practice in developing basic written and oral communications skills with emphasis on straight news reporting, interpretive news reporting, editorial writing, feature writing and developing copy for radio and television. Three contact hours.

**MTB – Mathematics: Technical and Business**

**MTB 1321 Technical Math I (D)** 3 cr.
Prerequisite: Two years of high school algebra. Applied mathematics involving the principles and laws of basic algebra, solution of linear equations, and basic analytical geometry. In each presentation, the work is supplemented with solutions to problems of technical nature. Three contact hours.

**MTB 2223 Technical Calculus (D)** 3 cr.
Prerequisite: MAC 1114. A course designed to give the student an introduction into elementary differential and integral calculus with emphasis on their application to engineering problems. Analytical geometry will be introduced where needed to clarify the calculus. Three contact hours.

**MTE – Marine Technology**

**MTE 2610 Marine Instrumentation (D)** 3 cr.
The student will benefit by taking high school physical science and mathematics prior to enrolling. In this course students will be instructed in the basic skills for the proper operation of hydrometers, refractometers, salinometers, barometers, sling psychrometers, dissolved oxygen analyzers, ph meters, spectrophotometers, autoclaves, centrifuges, photomicrographic equipment, marine filtering systems, anemometers, benthic collecting apparatus, drying ovens, Mettler balances, multi-parameter recording devices, strip-chart recorders and various types of probes. Six contact hours: four lecture hours; two laboratory hours.
MTR 1122 Basic Gas Metal-Arc Welding (O) 4 cr.
Prerequisite: MTR 1120 or demonstrated ability to satisfactorily complete the terminal objectives of MTR 1120. A course designed to provide the student with a practical understanding of welding safety, gas metal arc welding fundamentals, gas metal arc equipment adjustments, metal transfer and shielding gases. Special emphasis, through instructor demonstrations as well as student in-class practice, is placed on developing the manual skills necessary to produce high quality gas metal-arc welds in all positions on mild steel from 3/16” plate to 3/8” plate single pass and multiple pass, using short circuit transfer. Eight contact hours (theory/laboratory).

MTR 1171 Introduction to Non-Destructive Testing for Welders (O) 3 cr.
This is a course designed to provide the Welding Technology students with a basic understanding of the principles and applications of the visual, magnetic particle, liquid penetrant and radiographic methods used in non-destructive testing of joints. Special emphasis will be given to safety precautions and hands-on use of non-destructive testing equipment. Three contact hours.

MTR 1301 Introduction to Sheet Metal Practices (O) 3 cr.
A course designed to teach the shop rules and safety procedures to be followed in an industrial sheet metal shop. Identification, maintenance, and basic use of sheet metal hand tools and equipment will also be emphasized. Three contact hours.

MTR 1311 Basic Pattern Development and Fabrication (O) 4 cr.
Prerequisite: MTR 1301. A course designed to teach the correct procedure for pattern development and transference of patterns to metal for fabrication. Included in this course is proper development of common seams. Eight contact hours (theory/laboratory).

MTR 1313 Intermediate Pattern Development and Fabrication I (O) 4 cr.
Prerequisite: MTR 1311. This course is designed to teach parallel line development used in the layout of round pipe. Eight contact hours (theory/laboratory).

MTR 1314 Intermediate Pattern Development and Fabrication II (O) 4 cr.
Prerequisite: MTR 1313. This course is an introduction to the triangulation method of pattern development. It teaches the terminology and theory of triangulation and how dimensions of offsets are determined. Eight contact hours (theory/laboratory).

MTR 1472 Machine Lathe Work (O) 4 cr.
This machinist course is designed to teach theory-machining concepts and calculating setups and operational processing in the lathe trade (English and Metric). The lathe concepts cover safety, center drilling and their uses, alignment of lathe centers, mounting work between centers, facing, turning an accurate diameter, turning a shoulder, filing and polishing, burring, taper turning, thread cutting (internal and external), resetting a threading tool, mounting and removing a chuck, the three jaw chuck, drilling and reaming, cutting and grooving, setting work in a four jaw chuck, and grinding work in a lathe. Special emphasis is given to shop safety procedures. Eight contact hours (theory/laboratory).

MTR 1474 Surface Grinder-Methods and Procedures (Theory and Laboratory) (O) 4 cr.
This course is designed to teach the proper methods and procedures of surface grinding. Special emphasis is given to shop safety procedures for mounting and removing grinding wheels, truing and dressing a grinding wheel, grinding of a flat surface, grinding the edges of a workpiece square and parallel, and grinding an angular surface. Eight contact hours (theory/laboratory).

MTR 2123 Advanced Gas Metal-Arc Welding (O) 4 cr.
Prerequisite: MTR 1122. A course designed to provide the student with a practical understanding of the safety, welding fundamentals, and procedures for the all-position gas metal arc welding of aluminum as well as all-position gas metal arc welding of steel using gas shielded and self shielded flux core welding wire. Special emphasis, through instructor demonstrations in addition to student in-class practice, is placed in developing the manual skills necessary to produce high quality gas metal arc fillet and groove welds using saled aluminum and flux core steel welding wire. Eight contact hours (theory/laboratory).

MTR 2126 Gas Tungsten Arc Welding Tubing and Pipe (T.I.G.) (O) 4 cr.
Prerequisite: MTR 1120 or demonstrated ability to satisfactorily complete the terminal objective of the MTR 1120. A course designed to provide the student with a practical understanding of gas tungsten arc welding fundamentals, welding safety, arc characteristics, and equipment adjustment. Related information is presented on the weld properties and qualities of mild carbon steel, stainless steel, and aluminum as well as information on pulsed current in preparation for more detailed applications used in gas tungsten arc welding of pipe. Special emphasis, through professor's demonstration as well as student in-class practice, is placed on developing the manual skills necessary to make high quality welds in all positions on 16 and 11 gauge mild steel, 18 gauge stainless steel and 11 gauge aluminum. Eight contact hours (theory/laboratory).

MTR 2142 Shielded Metal Arc Welding of Pipe (O) 4 cr.
Prerequisite: MTR 1290 and MTR 1291. A course designed to provide the student with practical understanding of the techniques and procedures for shielded metal arc welding of pipe in accordance with the American Society of Mechanical Engineers (A.S.M.E.) and American Petroleum Institute (A.P.I.) codes. Special emphasis through instructor demonstrations as well as student in-class practice is placed in developing the skills necessary to pass the 180° guided bend qualification tests for the fixed horizontal (6g), fixed vertical (2g) and fixed 45° (6g) pipe positions. Eight contact hours (theory/laboratory).

MTR 2146 Gas Metal Arc Pipe Welding (M.I.G.) (O) 4 cr.
Prerequisite: MTR 1122 or demonstrated ability to satisfactorily complete the terminal objective of MTR 1122. A course designed to provide the student with a practical understanding of gas metal arc welding of pipe. Special emphasis is placed on developing the welding skills necessary to satisfactorily pass the American Society of Mechanical Engineers (A.S.M.E.) or American Petroleum Institute pressure vessel code (pipe). M.I.G. process test in the fixed 45° angle (6g) position. Eight contact hours (theory/laboratory).

MTR 2147 Basic Gas Tungsten Arc Welding (T.I.G.) Pipe and Tubing (O) 4 cr.
Prerequisite: MTR 2126 or demonstrated ability to satisfactorily complete the terminal objectives of MTR 2126. A
course designed to provide the student with a practical understanding of T.I.G. welding of pipe and tubing. Special emphasis through professor's demonstrations as well as student-in-class practice is placed in developing the welding skills necessary to satisfactorily pass the American Society of Mechanical Engineers (A.S.M.E.) pressure vessel (pipe), T.I.G. process test in the fixed 45° (6g) position. Eight contact hours (theory/laboratory).

MTR 2316  Advanced Pattern Development and Fabrication I (O)  4 cr.  
Prerequisite: MTR 1314. This course is designed to teach advanced triangulation method of pattern development. The less common fittings and more technical or specialized patterns are emphasized. Eight contact hours (theory/laboratory).

MTR 2317  Advanced Pattern Development and Fabrication II (O)  4 cr.  
Prerequisite: MTR 2316. This course is designed as an introduction to radial line development and the most common fittings which are laid out by the radial line process. Eight contact hours (theory/laboratory).

MTR 2345  Practicum in Sheet Metal (O)  3 cr.  
Prerequisite: MTR 2317. This course is designed to provide the experience of working on actual job related projects. Six contact hours (theory/laboratory).

MTR 2481  Vertical Milling Methods and Procedures (O)  4 cr.  
This course is designed to teach the proper methods and procedures of machining in a vertical milling machine. Special emphasis is given to shop safety methods and procedures of cutters and end mills that can be used in a vertical milling machine for performing various operations. Covered are the mounting of various cutters, alignment of head and vise in order to mill a flat surface, square and parallel surface, and machine an angular surface. Eight contact hours (theory/laboratory).

MTR 2482  Horizontal Milling Methods and Procedures (Theory) (O)  4 cr.  
This course is designed to teach the methods and procedures of correctly setting up to perform various horizontal milling operations. Covered are the proper methods and procedures in changing cutters and arbors, alignment of the vise in order to mill a flat surface, vertical surface and an angular surface, as well as using safety precautions in setting up and operating. Eight contact hours (theory/laboratory).

MTR 2483  Machine Shaper (O)  4 cr.  
This course is designed to teach the theory machining concepts and calculating setups and operational processing in the shaper trade (English-Metric). The shaper concepts cover safety, setting work in the vise, setting of the length and position of the shaper stroke, machining of a flat surface, machining work square and parallel, the alignment of work in a vise, the alignment of the toolhead, shaping a vertical surface, and machining an angular surface. Special emphasis is given to shop safety precautions. Eight contact hours (theory/laboratory).

MTR 2484  Machine Measurement (O)  3 cr.  
Prerequisite: MAT 0024. This course is designed to teach principles and manipulate the English metric system of measurement. Special emphasis is given to shop safety procedures, methods and use of the scale, inside and outside micrometers (English and Metric), inside and outside calipers, telescope gauges, combination set, and thread micrometers. Six contact hours (theory/laboratory).

Music Courses

MUC – Music: Composition

MUC 1301  Introduction to Electronic Music (P)  2 cr.  
Prerequisite: Approval of professor. A beginning course in the history and practice of electronic music including laboratory work with tape recorders and synthesizers. Three contact hours (rehearsal).

MUE – Music: Education

MUE 1440  String Techniques (P)  1 cr.  
Teaches basic performance skills on violin, viola, violincello, or double bass. Open to music majors. Two contact hours (rehearsal).

MUE 1450  Woodwind Techniques (P)  1 cr.  
Teaches basic performance skills on clarinet or flute. Open to music majors. Two contact hours (rehearsal).

MUE 1460  Brass Techniques (P)  1 cr.  
Teaches basic performance skills on trumpet or trombone. Open to music majors. Two contact hours (rehearsal).

MUE 1470  Percussion Techniques (P)  1 cr.  
Teaches basic performance skills on percussion instruments with emphasis on rudimental snare drumming. Open to music majors. Two contact hours (rehearsal).

MUG – Music: Conduct

MUG 1201  Basic Conducting (Choral) (P)  2 cr.  
Prerequisite: MTP 1121 and/or consent of professor. Provides the student with an introduction to basic techniques used in directing choral rehearsals and performances. Three contact hours (rehearsal).

MUH – Music: History

MUH 2211  Survey of Music History (P)  3 cr.  
Prerequisite: ENC 1101 or satisfactory score on placement test. A study of the development of music from the early Medieval period to the present day with an emphasis upon the stylistic trends of each period. This course is recommended for music majors only. The course includes reading and writing competencies. Three contact hours.

MUH 2514  Folk and Traditional Music Of World Cultures (P)  3 cr.  
This course is designed for students with little or no previous musical training. It offers an introduction to the study of folk music, emphasizing those cultural sources that have had the most influence on music developing in the Americas, namely Europe, Sub-Saharan Africa, and Latin- and North America. Three contact hours.

MUH 2515  Music in Contemporary Cultures (P)  3 cr.  
Prerequisite: ANT 2410. This course is open to all students as an elective. Music in Contemporary Cultures is designed as a survey course to explore the basic methods of how music is maintained within a given culture as an artistic medium and as a source of cultural continuity, reflecting the values of a given culture or society. Three contact hours.

MUH 2561  Afro-American Music: A Vocal Study (P)  3 cr.  
This course is open to all students as an elective. It will focus on a study of the origins of the styles of Afro-American
music beginning with its African origins and proceeding to its development in the New World and subsequent influence on America’s indigenous music forms through the present day. With an emphasis on vocal idioms to facilitate courage and including Minstrelsy, Blues, Rhythm and Blues, Soul, Rock, Gospel and Jazz. Three contact hours.

MUL – Music: Literature

MUL 1011 Music Appreciation (P) 3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. A course designed for students with little or no musical training. Combines a limited amount of training in music terminology with extensive listening. The course includes reading and writing competencies. Three contact hours.

MUL 1600 Recording Techniques I (P) 3 cr.
This course is open to all students. It offers the beginner basic information in the art of recording vocal and instrumental sound with emphasis on understanding the functions of recording equipment, placement of microphones, making initial recordings of various groups or soloists, and the ability to mix down the initial recordings. Six contact hours: two lecture hours; four studio hours.

MUL 1601 Recording Techniques II (P) 3 cr.
Prerequisite: MUL 1600. This is a continuation of MUL 1600 with emphasis on the mixing process. Materials fee $15.00. Six contact hours: two lecture hours; four studio hours.

MUM – Music: Commercial

MUM 1130 Symphonic Band (P) 1 cr.
Open to all students of the College with the permission of the professor. All students who have had previous band experience are urged to participate. Traditional and contemporary band literature are included in the repertoire. Required of all woodwind, brass, and percussion majors. May be elected for credit each semester, with up to four credits counting toward AA degree. Six contact hours (rehearsal).

MUM 1280 Community Orchestra (P) 1 cr.
The Community Orchestra provides instrumentalists in the College and community an opportunity to perform works representative of a broad spectrum of orchestral literature, to refine techniques of ensemble playing, and present concerts each term. Membership by permission of the director and/or audition. Participation by string majors is required. May be elected for credit each semester, with up to four credits counting toward AA degree. Two contact hours (rehearsal).

MUNA 1310 College Chorus (P) 1 cr.
Choral organization open to all college students. Many styles of choral music are included in the repertoire. Can be selected for credit each semester, with up to four credits counting toward AA degree. Three contact hours (rehearsal).

MUNB 1310 College Chorale (P) 1 cr.
Prerequisite: permission of director. Before entering course: previous choral experience and/or audition with professor. The repertoire of the College Chorale includes the more difficult sacred and secular compositions, accompanied and unaccompanied. May be elected for credit each semester, with up to four credits counting toward AA degree. Five contact hours (rehearsal).

MUN 1340 Chamber Choir (P) 1 cr.
Prerequisite: Previous choral experience and audition with the director. The repertoire of the Chamber Choir includes sacred and secular compositions, with an emphasis on a capella literature of the 17th through the 20th centuries. Membership limited to fifteen (15) to twenty (20) singers. May be elected for credit each semester, with up to four (4) credits counting toward AA degree. Three contact hours (rehearsal).

MUN 1380 Community Chorus, Jacksonville Concert Chorale (P) 1 cr.
Evening choral organization open by audition to members of the community. Repertoire includes secular and sacred major works for chorus and orchestra, as well as shorter compositions. May be elected each semester for credit, with up to four credits counting toward AA degree. Two contact hours (rehearsal).

MUN 1410 String Ensemble (P) 1 cr.
Prerequisite: permission of the professor. All students who have experience as players of bowed string instruments are urged to audition. The standard literature for string ensembles will be performed independently and in conjunction with other music performing organizations. Can be elected for credit each semester, with up to four credits counting toward AA degree. Three contact hours (rehearsal).

MUN 1450 Piano Ensemble and Accompanying (P) 1 cr.
This course is open to all piano majors and principals. It provides the student with an introduction to multiple piano skills, chamber music skills, and the art of piano accompanying - choral and instrumental. May be elected for credit each semester, with up to four credits counting toward AA degree. Approval of the professor is required for piano minors and non-music majors. Three contact hours (rehearsal).

MUN 1710 Jazz-Rock Ensemble (P) 1 cr.
Prerequisite: permission of the director. The repertoire includes various styles from jazz and popular literature. May be selected for credit each semester, with up to four credits counting toward AA degree. Three contact hours (rehearsal).

MUO – Music: Opera/Musical Theatre

MUO 1001 Music Theatre Workshop (P) 1 cr.
Open by audition to persons interested in theatre and music in the areas of performance and technical operation. May be elected for credit each semester, with up to four credits counting toward AA degree. One major production each term. Three contact hours (rehearsal).

MUS – Music

MUS 1000 Student Recital (P) 1 cr.
Required for all music majors. In conjunction with the one class meeting each week, the student is also required to attend an announced number of FJC-related concerts. Each music major enrolled for two hours of applied music is required to perform in student recital at least once during the academic year. Meeting time may be changed to coincide with special performance time. One contact hour.

MUT – Music: Theory

MUT 1001 Introduction to Music Theory (P) 3 cr.
A course designed for students whose background and Theory Placement Test scores indicate further preparation is
needed for MUT 1121. Includes work with elementary music terminology, notation, intervals, scales, chords, rhythm, sight singing, dictation, and keyboard skills. Three contact hours.

MUT 1121  Music Theory I (P)  4 cr.
An elementary course in music theory and the principles underlying all music. A basic course including music terminology, notation, harmony, melody, and rhythm. Sight singing and ear training are included. Five contact hours: three lecture hours; two rehearsal hours.

MUT 1122  Music Theory II (P)  4 cr.
Prerequisite: MUT 1121. A continuation of MUT 1121. A basic course including music terminology, notation, harmony, melody, rhythm, and form. Sight singing and ear training are included. Five contact hours: three lecture hours; two rehearsal hours.

MUT 2126  Music Theory III (P)  4 cr.
Prerequisite: MUT 1122. Techniques of analysis and part writing in vocal, keyboard and instrumental styles. Advanced tertian harmony, modulation, sequence, and phrase, and part forms. Sight singing and ear training included. Five contact hours: three lecture hours; two rehearsal hours.

MUT 2127  Music Theory IV (P)  4 cr.
Prerequisite: MUT 2126. Altered and chromatic chords, extension of tonality, 20th century harmonic, melodic, and rhythmic styles. Advanced sight singing and ear training included. Five contact hours: three lecture hours; two rehearsal hours.

MUT 2231  Keyboard Harmony (P)  1 cr.
Prerequisite: MUT 2127. Development of skills at the piano. Emphasis upon harmonization of melodies, modulation, transposition, and improvisation. Required of all music majors. Two rehearsal hours.

MUT 2232  Keyboard Harmony (P)  1 cr.
Prerequisite: MUT 2231. A continuation of MUT 2231. Two rehearsal hours.

MVK – Music: Keyboard

MVKA 1111  Class Piano I (P)  1 cr.
For beginning piano students meeting in groups. Emphasis placed on music reading and elementary techniques. Required of all music majors unless exempted. Two contact hours (rehearsal).

MVKB 1111  Class Piano II (P)  1 cr.
Prerequisite: MVKA 1111. A continuation of MVKA 1111. Required of all music majors. Two contact hours (rehearsal).

MVKA 2121  Class Piano III (P)  1 cr.
Prerequisite: MVKB 1111. A continuation of MVKB 1111. Two contact hours (rehearsal).

MVKB 2121  Class Piano IV (P)  1 cr.
Prerequisite: MVKA 2121. A continuation of MVKA 2121. Two contact hours (rehearsal).

MVKA 2621  Basic Piano Pedagogy I (P)  2 cr.
A class designed to prepare students for private and class piano teaching at the levels of beginner, intermediate and advanced. Three contact hours.

MVKB 2621  Basic Piano Pedagogy II (P)  2 cr.
A class in which students will teach piano under supervision. Students will teach piano pupils who are in the beginning, intermediate and advanced level. Three contact hours.

MVS – Music: Strings

MVSA 1116  Class Guitar I (P)  1 cr.
A basic course designed for students who are interested in studying Classic Guitar. Includes a study of the development of the instrument, past and present guitar masters, and the music literature for the guitar and technique. Two contact hours (rehearsal).

MVSB 1116  Class Guitar II (P)  1 cr.
Prerequisite: MVSA 1116. A continuation of MVSA 1116. Class Guitar I, perfecting and advancing skills learned therein. Two contact hours (rehearsal).

MVSA 2126  Class Guitar III (P)  1 cr.
Prerequisite: MVSB 1116. A continuation of MVSA 2126, perfecting and advancing skills learned therein. Two contact hours (rehearsal).

MVSA 2126  Class Guitar IV (P)  1 cr.
Prerequisite: MVSA 2126. A continuation of MVSA 2126, perfecting and advancing skills learned therein. Two contact hours (rehearsal).

MVV – Music: Voice

MVVA 1111  Class Voice I (P)  1 cr.
For singers wishing to further their vocal skills and instrumentalists wishing a fundamental vocal knowledge. Emphasis on correct diction and tone production. Individual aid given. Two contact hours (rehearsal).

MVVB 1111  Class Voice II (P)  1 cr.
Prerequisite: MVVA 1111. A continuation of MVVA 1111. Two contact hours (rehearsal).

MVVA 2121  Class Voice III (P)  1 cr.
Prerequisite: MVVA 1111. For singers wishing to develop vocal skills beyond elementary level of correct diction and tone production. Open also to instrumentalists wishing more than a basic vocal knowledge and competency level. Meets as a class, although individual attention is emphasized. Two contact hours (rehearsal).

MVVB 2121  Class Voice IV (P)  1 cr.
Prerequisite: MVVA 2121. A continuation of MVVA 2121. Two contact hours (rehearsal).

Applied Music Courses

MVB – Music: Brass

MVBA 1014  Applied Preparatory Baritone I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson a week.

MVBB 1014  Applied Preparatory Baritone II (P)  2 cr.
Prerequisite: MVBA 1014. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVBA 1314  Applied Principal Baritone I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBB 1314  Applied Principal Baritone II (P)  2 cr.
Prerequisite: MVBA 1314. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.
MVBA 2324 Applied Principal
Baritone III (P) 2 cr.
Prerequisite: MVBB 1314. Third semester of private lessons
designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVBB 2324 Applied Principal
Baritone IV (P) 2 cr.
Prerequisite: MVBA 2324. Fourth semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVBA 1214 Applied Secondary
Baritone I (P) 1 cr.
Prerequisite: Placement by audition before the music fac-
ulty. First semester of private lessons designed for music
majors needing to gain proficiency on an instrument other
than their principal or major. One half-hour lesson per
week.

MVBA 1214 Applied Secondary
Baritone II (P) 1 cr.
Prerequisite: MVBA 1214. Second semester of private les-
sions designed for music majors needing to gain proficiency
on an instrument other than their principal or major. One half-
hour lesson per week.

MVBA 2224 Applied Secondary
Baritone III (P) 1 cr.
Prerequisite: MVBB 1214. Third semester of private lessons
designed for music majors needing to gain proficiency on an
instrument other than their principal or major. One half-
hour lesson per week.

MVBB 2224 Applied Secondary
Baritone IV (P) 1 cr.
Prerequisite: MVBA 2224. Fourth semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVBA 1414 Applied Major
Baritone I (P) 3 cr.
Prerequisite: Placement by audition before the entire full-
time music faculty. First semester of private lessons
designed for the student majoring in performance. Two half-
hour lessons a week.

MVBB 1414 Applied Major
Baritone II (P) 3 cr.
Prerequisite: MVBA 1414. Second semester of private les-
sions designed for the student majoring in performance. Two half-
hour lessons a week.

MVBA 2424 Applied Major
Baritone III (P) 3 cr.
Prerequisite: MVBB 1414. Third semester of private lessons
designed for the student majoring in performance. Two half-
hour lessons a week.

MVBB 2424 Applied Major
Baritone IV (P) 3 cr.
Prerequisite: MVBA 2424. Fourth semester of private les-
sions designed for the student majoring in performance. Two half-
hour lessons a week.

MVW -- Music: Woodwinds

MVWA 1014 Applied Preparatory
Bassoon I (P) 2 cr.
Prerequisite: Placement by audition before the music fac-
ulty. Private lessons designed for music majors whose back-
ground indicates a need for further preparation. One hour
lesson a week.

MVWB 1014 Applied Preparatory
Bassoon II (P) 2 cr.
Prerequisite: MVWA 1014. Second semester of private les-
sions designed for music majors whose background indicates
a need for further preparation. One hour lesson per week.

MVWA 1314 Applied Principal
Bassoon I (P) 2 cr.
Prerequisite: Placement by audition before the music fac-
ulty. First semester of private lessons designed for the student
majoring in any area of music except performance (e.g.
music education, music therapy, etc.). Two half-hour lessons
a week.

MVWA 1314 Applied Principal
Bassoon II (P) 2 cr.
Prerequisite: MVWA 1314. Second semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVWA 2324 Applied Principal
Bassoon III (P) 2 cr.
Prerequisite: MVWB 1314. Third semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVWA 2324 Applied Principal
Bassoon IV (P) 2 cr.
Prerequisite: MVWA 2324. Fourth semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVWA 1214 Applied Secondary
Bassoon I (P) 1 cr.
Prerequisite: Placement by audition before the music fac-
ulty. First semester of private lessons designed for music
majors needing to gain proficiency on an instrument other
than their principal or major. One half-hour lesson per
week.

MVWA 1214 Applied Secondary
Bassoon II (P) 1 cr.
Prerequisite: MVWA 1214. Second semester of private les-
sions designed for music majors needing to gain proficiency on an
instrument other than their principal or major. One half-
hour lesson per week.
MVBW 1414 Applied Major
Bassoon II (P) 3 cr.
Prerequisite: MVWA 1414. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWA 2424 Applied Major
Bassoon III (P) 3 cr.
Prerequisite: MVWB 1414. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWB 2424 Applied Major
Bassoon IV (P) 3 cr.
Prerequisite: MVWA 2424. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVS – Music: Strings (Continued)
Cello

MVSA 1013 Applied Preparatory
Cello I (P) 2 cr.
Prerequisite: Placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson a week.

MVSB 1013 Applied Preparatory
Cello II (P) 2 cr.
Prerequisite: MVSA 1013. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVSA 1313 Applied Principal
Cello I (P) 2 cr.
Prerequisite: Placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSB 1313 Applied Principal
Cello II (P) 2 cr.
Prerequisite: MVSA 1313. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 2323 Applied Principal
Cello III (P) 2 cr.
Prerequisite: MVSB 1313. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSB 2323 Applied Principal
Cello IV (P) 2 cr.
Prerequisite: MVSA 2323. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 1213 Applied Secondary
Cello I (P) 1 cr.
Prerequisite: Placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSB 1213 Applied Secondary
Cello II (P) 1 cr.
Prerequisite: MVSA 1213. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MNSA 2223 Applied Secondary
Cello III (P) 1 cr.
Prerequisite: MVSB 1213. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSB 2223 Applied Secondary
Cello IV (P) 1 cr.
Prerequisite: MNSA 2223. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MNSA 1413 Applied Major Cello I (P) 3 cr.
Prerequisite: Placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSB 1413 Applied Major Cello II (P) 3 cr.
Prerequisite: MNSA 1413. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSB 2423 Applied Major Cello III (P) 3 cr.
Prerequisite: MVSB 2423. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSB 2423 Applied Major Cello IV (P) 3 cr.
Prerequisite: MVSB 2423. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVC – Music: Woodwinds (Continued)
Clarinet

MVWA 1013 Applied Preparatory
Clarinet I (P) 2 cr.
Prerequisite: Placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson a week.

MVWB 1013 Applied Preparatory
Clarinet II (P) 2 cr.
Prerequisite: MVWA 1013. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1313 Applied Principal
Clarinet I (P) 2 cr.
Prerequisite: Placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWB 1313 Applied Principal
Clarinet II (P) 2 cr.
Prerequisite: MVWA 1313. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1213 Applied Secondary
Clarinet I (P) 1 cr.
Prerequisite: Placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWA 2323 Applied Principal
Clarinet III (P) 2 cr.
Prerequisite: MVWB 1313. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.
MVWB 2323 Applied Principal Clarinet IV (P) 2 cr.
Prerequisite: MVWA 2323. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1213 Applied Secondary Clarinet I (P) 1 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWB 1213 Applied Secondary Clarinet II (P) 1 cr.
Prerequisite: MVWA 1213. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWA 2223 Applied Secondary Clarinet III (P) 1 cr.
Prerequisite: MVWA 2223. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWB 2223 Applied Secondary Clarinet IV (P) 1 cr.
Prerequisite: MVWA 2223. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1413 Applied Major Clarinet I (P) 3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWB 1413 Applied Major Clarinet II (P) 3 cr.
Prerequisite: MVWA 1413. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWA 2423 Applied Major Clarinet III (P) 3 cr.
Prerequisite: MVWA 2423. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWB 2423 Applied Major Clarinet IV (P) 3 cr.
Prerequisite: MVWA 2423. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVW – Music: Woodwinds (Continued)

MVWA 1011 Applied Preparatory Flute I (P) 2 cr.
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVWB 1011 Applied Preparatory Flute II (P) 2 cr.
Prerequisite: MVWA 1011. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVWA 1311 Applied Principal Flute I (P) 2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.

MVWB 1311 Applied Principal Flute II (P) 2 cr.
Prerequisite: MVWA 1311. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 2321 Applied Principal Flute III (P) 2 cr.
Prerequisite: MVWA 1311. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.

MVWB 2321 Applied Principal Flute IV (P) 2 cr.
Prerequisite: MVWA 2321. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1211 Applied Secondary Flute I (P) 1 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWB 1211 Applied Secondary Flute II (P) 1 cr.
Prerequisite: MVWA 1211. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). One half-hour lesson per week.

MVWA 2221 Applied Secondary Flute III (P) 1 cr.
Prerequisite: MVWA 2221. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). One half-hour lesson per week.

MVWB 2221 Applied Secondary Flute IV (P) 1 cr.
Prerequisite: MVWA 2221. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). One half-hour lesson per week.

MVWA 1411 Applied Major Flute I (P) 3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWB 1411 Applied Major Flute II (P) 3 cr.
Prerequisite: MVWA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWA 2421 Applied Major Flute III (P) 3 cr.
Prerequisite: MVWA 1411. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWB 2421 Applied Major Flute IV (P) 3 cr.
Prerequisite: MVWA 2421. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.
MVBA 1412  Applied Major
French Horn I (P)    3 cr.
Prerequisite: placement by audition before the entire full-
time music faculty. First semester of private lessons
designed for the student majoring in performance. Two half-
hour lessons a week.

MVBB 1412  Applied Major
French Horn II (P)   3 cr.
Prerequisite: MVBA 1412. Second semester of private les-
sions designed for the student majoring in performance. Two half-
hour lessons a week.

MVBA 2422  Applied Major
French Horn III (P)  3 cr.
Prerequisite: MVBB 1412. Third semester of private lessons
designed for the student majoring in performance. Two half-
hour lessons a week.

MVBB 2422  Applied Major
French Horn IV (P)   3 cr.
Prerequisite: MVBA 2422. Fourth semester of private les-
sions designed for the student majoring in performance. Two half-
hour lessons a week.

MVS – Music: Strings (Continued)

MVSA 1016  Applied Preparatory
Guitar I (P)         2 cr.
Prerequisite: placement by audition before the music fac-
ulty. Private lessons designed for music majors whose back-
ground indicates a need for further preparation. One hour les-
son per week.

MVSA 2016  Applied Preparatory
Guitar II (P)        2 cr.
Prerequisite: MVSA 1016. Second semester of private les-
sions designed for music majors whose background indicates a need for further preparation. Two half-hour lessons a week.

MVSA 2322  Applied Preparatory
Guitar III (P)       2 cr.
Prerequisite: MVSA 2016. Second semester of private les-
sions designed for music majors whose background indicates a need for further preparation. Two half-hour lessons a week.

MVSA 2322  Applied Preparatory
Guitar IV (P)        2 cr.
Prerequisite: MVSA 2322. Third semester of private lessons
designed for music majors whose background indicates a need for further preparation. Two half-hour lessons a week.

MVSA 1316  Applied Principal
Guitar I (P)         2 cr.
Prerequisite: placement by audition before the music fac-
ulty. First semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVSA 1316  Applied Principal
Guitar II (P)        2 cr.
Prerequisite: MVSA 1316. Second semester of private les-
sions designed for music majors whose background indicates a need for further preparation. Two half-hour lessons a week.

MVSA 2326  Applied Principal
Guitar III (P)       2 cr.
Prerequisite: MVSA 1316. Third semester of private lessons
designed for the student majoring in any area of music ex-
cept performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 2326  Applied Principal
Guitar IV (P)        2 cr.
Prerequisite: MVSA 2326. Fourth semester of private les-
sions designed for the student majoring in any area of music ex-
cept performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 1216  Applied Secondary
Guitar I (P)         1 cr.
Prerequisite: placement by audition before the music fac-
ulty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSA 1216  Applied Secondary
Guitar II (P)        1 cr.
Prerequisite: MVSA 1216. Second semester of private les-
sions designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSA 1216  Applied Secondary
Guitar III (P)       1 cr.
Prerequisite: MVSA 1216. Third semester of private lessons
designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-
hour lesson per week.

MVSA 1216  Applied Secondary
Guitar IV (P)        1 cr.
Prerequisite: MVSA 2326. Fourth semester of private les-
sions designed for the student majoring in any area of music ex-
cept performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.
majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSA 2226 Applied Secondary
Guitar IV (P) 1 cr.
Prerequisite: MVSA 2226. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 1416 Applied Major Guitar I (P) 3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSA 1416 Applied Major Guitar II (P) 3 cr.
Prerequisite: MVSA 1416. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSA 2426 Applied Major
Guitar III (P) 3 cr.
Prerequisite: MVSA 2426. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSA 2426 Applied Major
Guitar IV (P) 3 cr.
Prerequisite: MVSA 2426. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVW – Music: Woodwinds (Continued)
Oboe

MVWA 1012 Applied Preparatory
Oboe I (P) 2 cr.
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVW 1012 Applied Preparatory
Oboe II (P) 2 cr.
Prerequisite: MVWA 1012. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVWA 1312 Applied Principal
Oboe I (P) 2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1312 Applied Principal
Oboe II (P) 2 cr.
Prerequisite: MVWA 1312. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 2322 Applied Principal
Oboe III (P) 2 cr.
Prerequisite: MVWA 1312. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 2322 Applied Principal
Oboe IV (P) 2 cr.
Prerequisite: MVWA 2322. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1212 Applied Secondary
Oboe I (P) 1 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWA 1212 Applied Secondary
Oboe II (P) 1 cr.
Prerequisite: MVWA 1212. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWA 2222 Applied Secondary
Oboe III (P) 1 cr.
Prerequisite: MVWA 2222. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWA 2222 Applied Secondary
Oboe IV (P) 1 cr.
Prerequisite: MVWA 2222. Fourth semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWA 2422 Applied Secondary
Oboe IV (P) 1 cr.
Prerequisite: MVWA 2222. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1412 Applied Major Oboe I (P) 3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWA 1412 Applied Major Oboe II (P) 3 cr.
Prerequisite: MVWA 1412. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWA 2422 Applied Major Oboe III (P) 3 cr.
Prerequisite: MVWA 1412. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVWA 2422 Applied Major Oboe IV (P) 3 cr.
Prerequisite: MVWA 2422. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVK – Music: Keyboard (Continued)
Organ

MVKA 1013 Applied Preparatory
Organ I (P) 2 cr.
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisite(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVKA 1013</td>
<td>Applied Preparatory Org. II (P)</td>
<td>2 cr.</td>
<td>MVKA 1013. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.</td>
</tr>
<tr>
<td>MVKA 1313</td>
<td>Applied Principal Org. I (P)</td>
<td>2 cr.</td>
<td>MVKA 1313. Placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.</td>
</tr>
<tr>
<td>MVKA 2323</td>
<td>Applied Principal Org. III (P)</td>
<td>2 cr.</td>
<td>MVKA 2323. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.</td>
</tr>
<tr>
<td>MVKA 2323</td>
<td>Applied Principal Org. IV (P)</td>
<td>2 cr.</td>
<td>MVKA 2323. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.</td>
</tr>
<tr>
<td>MVKA 1213</td>
<td>Applied Secondary Org. I (P)</td>
<td>1 cr.</td>
<td>MVKA 1213. Placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.</td>
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<tr>
<td>MVKA 1213</td>
<td>Applied Secondary Org. II (P)</td>
<td>1 cr.</td>
<td>MVKA 1213. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.</td>
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<tr>
<td>MVKA 2223</td>
<td>Applied Secondary Org. III (P)</td>
<td>1 cr.</td>
<td>MVKA 2223. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.</td>
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<tr>
<td>MVKA 2223</td>
<td>Applied Secondary Org. IV (P)</td>
<td>1 cr.</td>
<td>MVKA 2223. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.</td>
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<tr>
<td>MVKA 1413</td>
<td>Applied Major Org. I (P)</td>
<td>3 cr.</td>
<td>MVKA 1413. Placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.</td>
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<tr>
<td>MVKA 1413</td>
<td>Applied Major Org. II (P)</td>
<td>3 cr.</td>
<td>MVKA 1413. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.</td>
</tr>
<tr>
<td>MVKA 2423</td>
<td>Applied Major Org. III (P)</td>
<td>3 cr.</td>
<td>MVKA 2423. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.</td>
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<tr>
<td>MVKA 2423</td>
<td>Applied Major Org. IV (P)</td>
<td>3 cr.</td>
<td>MVKA 2423. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.</td>
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<tr>
<td>MVO – Music: Other Instruments Other</td>
<td></td>
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</tr>
<tr>
<td>MVOA 1010</td>
<td>Applied Preparatory Other I (P)</td>
<td>2 cr.</td>
<td>MVOA 1010. Placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.</td>
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<tr>
<td>MVOB 1010</td>
<td>Applied Preparatory Other II (P)</td>
<td>2 cr.</td>
<td>MVOB 1010. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.</td>
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<tr>
<td>MVOA 1310</td>
<td>Applied Principal Other I(P)</td>
<td>2 cr.</td>
<td>MVOA 1310. Placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.</td>
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<td>MVOB 1310</td>
<td>Applied Principal Other II (P)</td>
<td>2 cr.</td>
<td>MVOA 1310. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.</td>
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<tr>
<td>MVOA 2320</td>
<td>Applied Principal Other III (P)</td>
<td>2 cr.</td>
<td>MVOA 2320. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.</td>
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<tr>
<td>MVOB 2320</td>
<td>Applied Principal Other IV (P)</td>
<td>2 cr.</td>
<td>MVOB 2320. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g., music education, music therapy, etc.). Two half-hour lessons a week.</td>
</tr>
<tr>
<td>MVOA 1210</td>
<td>Applied Secondary Other I (P)</td>
<td>1 cr.</td>
<td>MVOA 1210. Placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.</td>
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<td>MVOB 1210</td>
<td>Applied Secondary Other II (P)</td>
<td>1 cr.</td>
<td>MVOA 1210. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.</td>
</tr>
</tbody>
</table>
MVOA 2220  Applied Secondary Other III (P)  1 cr.
Prerequisite: MVOB 1210. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVOB 2220  Applied Secondary Other IV (P)  1 cr.
Prerequisite: MVOA 2220. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVOA 1410  Applied Major Other I (P)  3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVOA 1410  Applied Major Other II (P)  3 cr.
Prerequisite: MVOA 1410. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVOA 2420  Applied Major Other III (P)  3 cr.
Prerequisite: MVOA 1410. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVOA 2420  Applied Major Other IV (P)  3 cr.
Prerequisite: MVOA 2420. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVP – Music Percussion

MVPB 2321  Applied Principal Percussion IV (P)  2 cr.
Prerequisite: MVPB 2321. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVPB 2321  Applied Principal Percussion III (P)  2 cr.
Prerequisite: MVPB 2321. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 1011  Applied Preparatory Piano I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVKA 1011  Applied Preparatory Piano II (P)  2 cr.
Prerequisite: MVPA 1011. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVKA 1311  Applied Principal Piano I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 1311  Applied Principal Piano II (P)  2 cr.
Prerequisite: MVPA 1311. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 1311  Applied Principal Piano III (P)  2 cr.
Prerequisite: MVPA 1311. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 1311  Applied Principal Piano IV (P)  2 cr.
Prerequisite: MVPA 1311. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 1411  Applied Major Piano I (P)  3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 1411  Applied Major Piano II (P)  3 cr.
Prerequisite: MVPA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 1411  Applied Major Piano III (P)  3 cr.
Prerequisite: MVPA 1411. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 1411  Applied Major Piano IV (P)  3 cr.
Prerequisite: MVPA 1411. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVK – Music: Keyboard (Continued)

MVKA 1011  Applied Preparatory Piano I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVKA 1011  Applied Preparatory Piano II (P)  2 cr.
Prerequisite: MVPA 1011. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVKA 1011  Applied Preparatory Piano III (P)  2 cr.
Prerequisite: MVPA 1011. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVKA 1011  Applied Preparatory Piano IV (P)  2 cr.
Prerequisite: MVPA 1011. Fourth semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVKA 1411  Applied Major Piano I (P)  3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 1411  Applied Major Piano II (P)  3 cr.
Prerequisite: MVPA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 1411  Applied Major Piano III (P)  3 cr.
Prerequisite: MVPA 1411. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 1411  Applied Major Piano IV (P)  3 cr.
Prerequisite: MVPA 1411. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.
MVKA 1011  Applied Preparatory Piano II (P)  2 cr.
Prerequisite: MVKA 1011. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVKA 1311  Applied Principal Piano I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 1311  Applied Principal Piano II (P)  2 cr.
Prerequisite: MVKA 1311. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 2321  Applied Principal Piano III (P)  2 cr.
Prerequisite: MVKA 1311. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 2321  Applied Principal Piano IV (P)  2 cr.
Prerequisite: MVKA 2321. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 1211  Applied Secondary Piano I (P)  1 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVKA 1211  Applied Secondary Piano II (P)  1 cr.
Prerequisite: MVKA 1211. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVKA 2221  Applied Secondary Piano III (P)  1 cr.
Prerequisite: MVKA 1211. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVKA 2221  Applied Secondary Piano IV (P)  1 cr.
Prerequisite: MVKA 2221. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVKA 1411  Applied Major Piano I (P)  3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 1411  Applied Major Piano II (P)  3 cr.
Prerequisite: MVKA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 2421  Applied Major Piano III (P)  3 cr.
Prerequisite: MVKA 1411. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVKA 2421  Applied Major Piano IV (P)  3 cr.
Prerequisite: MVKA 2421. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVW – Music: Woodwinds (Continued)

MVWA 1015  Applied Preparatory Saxophone I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVWB 1015  Applied Preparatory Saxophone II (P)  2 cr.
Prerequisite: MVWA 1015. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVWA 1315  Applied Principal Saxophone I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWB 1315  Applied Principal Saxophone II (P)  2 cr.
Prerequisite: MVWA 1315. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 2325  Applied Principal Saxophone III (P)  2 cr.
Prerequisite: MVWA 1315. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons per week.

MVWB 2325  Applied Principal Saxophone IV (P)  2 cr.
Prerequisite: MVWA 2325. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVWA 1215  Applied Secondary Saxophone I (P)  1 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWB 1215  Applied Secondary Saxophone II (P)  1 cr.
Prerequisite: MVWA 1215. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVWA 2225  Applied Secondary Saxophone III (P)  1 cr.
Prerequisite: MVWB 1215. Third semester of private lessons designed for music majors needing to gain proficiency
on an instrument other than their principal or major. One half-hour lesson per week.

**MVWB 2225** Applied Secondary  
Saxophone IV (P) 1 cr.  
Prerequisite: MVWA 2225. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

**MVWA 1415** Applied Major  
Saxophone I (P) 3 cr.  
Prerequisite: placement by audition before the entire full-time faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVWB 1415** Applied Major  
Saxophone II (P) 3 cr.  
Prerequisite: MVWA 1415. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVWA 2425** Applied Major  
Saxophone III (P) 3 cr.  
Prerequisite: MVWA 2425. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVWB 2425** Applied Major  
Saxophone IV (P) 3 cr.  
Prerequisite: MVWA 2425. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVS – Music: Strings (Continued)**

**String Bass**

**MVSA 1014** Applied Preparatory  
String Bass I (P) 2 cr.  
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson a week.

**MVSB 1014** Applied Preparatory  
String Bass II (P) 2 cr.  
Prerequisite: MVSA 1014. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

**MVSA 1314** Applied Principal  
String Bass I (P) 2 cr.  
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

**MVSB 1314** Applied Principal  
String Bass II (P) 2 cr.  
Prerequisite: MVSA 1314. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

**MVSA 2324** Applied Principal  
String Bass III (P) 2 cr.  
Prerequisite: MVSB 1314. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

**MVSB 2324** Applied Principal  
String Bass IV (P) 2 cr.  
Prerequisite: MVSA 2324. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

**MVSA 1214** Applied Secondary  
String Bass I (P) 1 cr.  
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

**MVSB 1214** Applied Secondary  
String Bass II (P) 1 cr.  
Prerequisite: MVSA 1214. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

**MVSA 2224** Applied Secondary  
String Bass III (P) 1 cr.  
Prerequisite: MVSB 1214. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

**MVSB 2224** Applied Secondary  
String Bass IV (P) 1 cr.  
Prerequisite: MVSA 2224. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

**MVSA 1414** Applied Major  
String Bass I (P) 3 cr.  
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSB 1414** Applied Major  
String Bass II (P) 3 cr.  
Prerequisite: MVSA 1414. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSA 2424** Applied Major  
String Bass III (P) 3 cr.  
Prerequisite: MVSB 1414. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSB 2424** Applied Major  
String Bass IV (P) 3 cr.  
Prerequisite: MVSA 2424. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVB – Music: Brasses (Continued)**

**Trombone**

**MVBA 1013** Applied Preparatory  
Trombone I (P) 2 cr.  
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson a week.
MVBB 1013  Applied Preparatory Trombone II (P)  2 cr.
Prerequisite: MVBB 1013. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVBB 1313  Applied Principal Trombone I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music ed., music therapy, etc.) Two half-hour lessons a week.

MVBB 1313  Applied Principal Trombone II (P)  2 cr.
Prerequisite: MVBB 1313. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBA 2323  Applied Principal Trombone III (P)  2 cr.
Prerequisite: MVBB 2323. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBA 2323  Applied Principal Trombone IV (P)  2 cr.
Prerequisite: MVBB 2323. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.) Two half-hour lessons a week.

MVBA 1213  Applied Secondary Trombone I (P)  1 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVBB 1213  Applied Secondary Trombone II (P)  1 cr.
Prerequisite: MVBB 1213. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVBA 2223  Applied Secondary Trombone III (P)  1 cr.
Prerequisite: MVBB 2223. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVBB 2223  Applied Secondary Trombone IV (P)  1 cr.
Prerequisite: MVBB 2223. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBA 1413  Applied Major Trombone I (P)  3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVBB 1413  Applied Major Trombone II (P)  3 cr.
Prerequisite: MVBB 1413. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVBA 2423  Applied Major Trombone III (P)  3 cr.
Prerequisite: MVBB 1413. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVBB 2423  Applied Major Trombone IV (P)  3 cr.
Prerequisite: MVBA 2423. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVB – Music: Brasses (Continued)

Trumpet

MVBA 1011  Applied Preparatory Trumpet I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson a week.

MVBA 1011  Applied Preparatory Trumpet II (P)  2 cr.
Prerequisite: MVBA 1011. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVBA 1311  Applied Principal Trumpet I (P)  2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBA 1311  Applied Principal Trumpet II (P)  2 cr.
Prerequisite: MVBA 1311. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBA 2321  Applied Principal Trumpet III (P)  2 cr.
Prerequisite: MVBB 2321. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBA 2321  Applied Principal Trumpet IV (P)  2 cr.
Prerequisite: MVBB 2321. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBA 1211  Applied Secondary Trumpet I (P)  1 cr.
Prerequisite: MVBA 1211. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVBB 1211  Applied Secondary Trumpet II (P)  1 cr.
Prerequisite: MVBB 1211. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.
MVBA 2221  Applied Secondary
Trumpet III (P)  1 cr.
Prerequisite: MVBB 1211. Third semester of private lessons
designed for music majors needing to gain proficiency on an
instrument other than their principal or major. One half-hour
lesson per week.

MVBB 2221  Applied Secondary
Trumpet IV (P)  1 cr.
Prerequisite: MVBB 2221. Fourth semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVBA 1411  Applied Major
Trumpet I (P)  3 cr.
Prerequisite: placement by audition before the entire full-
time music faculty. First semester of private lessons
designed for the student majoring in performance. Two half-
hour lessons a week.

MVBB 1411  Applied Major
Trumpet II (P)  3 cr.
Prerequisite: MVBA 1411. Second semester of private les-
sions designed for the student majoring in performance. Two half-hour lessons a week.

MVBA 2421  Applied Major
Trumpet III (P)  3 cr.
Prerequisite: MVBB 1411. Third semester of private lessons
designed for the student majoring in performance. Two half-
hour lessons a week.

MVBB 2421  Applied Major
Trumpet IV (P)  3 cr.
Prerequisite: MVBA 2421. Fourth semester of private les-
sions designed for the student majoring in performance. Two half-hour lessons a week.

MVAB – Music: Brasses (continued)
Tuba

MVBA 1015  Applied Preparatory
Tuba I (P)  2 cr.
Prerequisite: placement by audition before the music fac-
culty. Private lessons designed for music majors whose back-
ground indicates a need for further preparation. One hour
lesson per week.

MVBB 1015  Applied Preparatory
Tuba II (P)  2 cr.
Prerequisite: MVBA 1015. Second semester of private les-
sions designed for music majors whose background indicates
a need for further preparation. One hour lesson per week.

MVBA 1315  Applied Principal
Tuba I (P)  2 cr.
Prerequisite: Placement by audition before the music fac-
culty. First semester of private lessons designed for the stu-
dent majoring in any area of music except performance (e.g.
music education, music therapy, etc.). Two half-hour lessons
a week.

MVBB 1315  Applied Principal
Tuba II (P)  2 cr.
Prerequisite: MVBA 1315. Second semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVBA 2325  Applied Principal
Tuba III (P)  2 cr.
Prerequisite: MVBB 1315. Third semester of private lessons
designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVBB 2325  Applied Principal
Tuba IV (P)  2 cr.
Prerequisite: MVBA 2325. Fourth semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVBA 1215  Applied Secondary
Tuba I (P)  1 cr.
Prerequisite: placement by audition before the music fac-
culty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other
than their principal or major. One half-hour lesson per week.

MVBA 2215  Applied Secondary
Tuba II (P)  1 cr.
Prerequisite: MVBA 1215. Second semester of private les-
sions designed for music majors needing to gain proficiency
on an instrument other than their principal or major. One half-
hour lesson per week.

MVBA 2225  Applied Secondary
Tuba III (P)  1 cr.
Prerequisite: MVBB 1215. Third semester of private lessons
designed for music majors needing to gain proficiency on an
instrument other than their principal or major. One half-
hour lesson per week.

MVBB 2225  Applied Secondary
Tuba IV (P)  1 cr.
Prerequisite: MVBA 2225. Fourth semester of private les-
sions designed for the student majoring in any area of music
except performance (e.g. music education, music therapy,
etc.). Two half-hour lessons a week.

MVBA 1415  Applied Major
Tuba I (P)  3 cr.
Prerequisite: placement by audition before the entire full-
time music faculty. First semester of private lessons
designed for the student majoring in performance. Two half-
hour lessons a week.

MVBA 1415  Applied Major
Tuba II (P)  3 cr.
Prerequisite: MVBA 1415. Second semester of private les-
sions designed for the student majoring in performance. Two half-hour lessons a week.

MVBA 2425  Applied Major
Tuba III (P)  3 cr.
Prerequisite: MVBB 1415. Third semester of private lessons
designed for the student majoring in performance. Two half-
hour lessons a week.

MVBA 2425  Applied Major
Tuba IV (P)  3 cr.
Prerequisite: MVBA 2425. Fourth semester of private les-
sions designed for the student majoring in performance. Two half-hour lessons a week.

MVS – Music: Strings (Continued)
Viola

MVSA 1012  Applied Preparatory
Viola I (P)  2 cr.
Prerequisite: placement by audition before the music fac-
culty. Private lessons designed for music majors whose back-
ground indicates a need for further preparation. One hour
lesson per week.
MVSB 1012 Applied Preparatory
Viola II (P) 2 cr.
Prerequisite: MVSA 1012. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVSA 1312 Applied Principal
Viola I (P) 2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 1312 Applied Principal
Viola II (P) 2 cr.
Prerequisite: MVSA 1312. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 2322 Applied Principal
Viola III (P) 2 cr.
Prerequisite: MVSA 1312. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 2322 Applied Principal
Viola IV (P) 2 cr.
Prerequisite: MVSA 2322. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 1212 Applied Secondary
Viola I (P) 1 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSA 1212 Applied Secondary
Viola II (P) 1 cr.
Prerequisite: MVSA 1212. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSA 2222 Applied Secondary
Viola III (P) 1 cr.
Prerequisite: MVSA 1212. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSA 2222 Applied Secondary
Viola IV (P) 1 cr.
Prerequisite: MVSA 2222. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 1412 Applied Major
Viola I (P) 3 cr.
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSA 1412 Applied Major
Viola II (P) 3 cr.
Prerequisite: MVSA 1412. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSA 2422 Applied Major
Viola III (P) 3 cr.
Prerequisite: MVSA 1412. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVSA 2422 Applied Major
Viola IV (P) 3 cr.
Prerequisite: MVSA 2422. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

MVS – Music: Strings (Continued)

MVSA 1011 Applied Preparatory
Violin I (P) 2 cr.
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVSA 1011 Applied Preparatory
Violin II (P) 2 cr.
Prerequisite: MVSA 1011. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVSA 1311 Applied Principal
Violin I (P) 2 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 1311 Applied Principal
Violin II (P) 2 cr.
Prerequisite: MVSA 1311. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 2321 Applied Principal
Violin III (P) 2 cr.
Prerequisite: MVSA 1311. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 2321 Applied Principal
Violin IV (P) 2 cr.
Prerequisite: MVSA 2321. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons a week.

MVSA 1211 Applied Secondary
Violin I (P) 1 cr.
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSA 1211 Applied Secondary
Violin II (P) 1 cr.
Prerequisite: MVSA 1211. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.
MVSA 2221  Applied Secondary  
Violin III (P)  
Prerequisite: MVSB 1211. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVSB 2221  Applied Secondary  
Violin IV (P)  
Prerequisite: MVSA 2221. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons per week.

MVSA 1411  Applied Major  
Violin I (P)  
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons designed for the student majoring in performance. Two half-hour lessons per week.

MVSB 1411  Applied Major  
Violin II (P)  
Prerequisite: MVSA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons per week.

MVSA 2421  Applied Major  
Violin III (P)  
Prerequisite: MVSB 1411. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons per week.

MVSB 2421  Applied Major  
Violin IV (P)  
Prerequisite: MVSA 2421. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons per week.

MVVA 1011  Applied Preparatory  
Voice I (P)  
Prerequisite: placement by audition before the music faculty. Private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVVB 1011  Applied Preparatory  
Voice II (P)  
Prerequisite: MVVA 1011. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

MVVA 1111  Class Voice I (P)  
For singers wishing to further their vocal skills and instrumentalists wishing a fundamental vocal knowledge. Emphasis on correct diction and tone production. Individual aid given. Two contact hours (rehearsal).

MVVB 1111  Class Voice II (P)  
A continuation of MVVA 1111. Two contact hours (rehearsal).

MVVA 1311  Applied Principal  
Voice I (P)  
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons per week.

MVVB 1311  Applied Principal  
Voice II (P)  
Prerequisite: MVVA 1311. Second semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons per week.

MVVA 2321  Applied Principal  
Voice III (P)  
Prerequisite: MVVB 1311. Third semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons per week.

MVVB 2321  Applied Principal  
Voice IV (P)  
Prerequisite: MVVA 2321. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons per week.

MVVA 1211  Applied Secondary  
Voice I (P)  
Prerequisite: placement by audition before the music faculty. First semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVVB 1211  Applied Secondary  
Voice II (P)  
Prerequisite: MVVA 1211. Second semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVVA 2221  Applied Secondary  
Voice III (P)  
Prerequisite: MVVB 1211. Third semester of private lessons designed for music majors needing to gain proficiency on an instrument other than their principal or major. One half-hour lesson per week.

MVVB 2221  Applied Secondary  
Voice IV (P)  
Prerequisite: MVVA 2221. Fourth semester of private lessons designed for the student majoring in any area of music except performance (e.g. music education, music therapy, etc.). Two half-hour lessons per week.
NUR – Nursing Practice and Theory

NUR 1040C Nursing Process I – Fundamentals of Nursing (O) 10 cr.
Prerequisites: APB 2180C, APB 2191C. Nursing I is a study of the principles and techniques that form the foundation for nursing care. The nursing process, assessment, planning, implementing and evaluating serves as the framework for the application of content. Emphasis is placed on nursing intervention and adaptations for specific age groups to meet the basic need of man in health maintenance. Content and experience focus on observations, communications, the interpersonal process, recording, hygienic practices, administration of drugs, asepsis, nutrition, elimination, fluid balance and oxygen. Current trends and legal implications of nursing are introduced. Fifteen contact hours: five class periods; ten hours of laboratory experience on campus, in community hospitals and other health agencies.

NUR 1052C Transitional Nursing Process I (O) 12 cr.
Prerequisite: APB 2190C, APB 2191C, MCB 2013C, ENC 1101, ENC 1102, PSY 1012, DEP 2004 and any one of the following SYG 2000, Humanities (Refer to AS degree General Education requirements), Social Science (Refer to AS degree General Education requirements). This course is designed for and limited to the Florida licensed practical nurse. It encompasses a review of fundamental concepts of health needs, asepsis, fluids/electrolytes and drug administration. Basic principles of mental health, communication, family and pediatric nursing are included. Emphasis is placed on resocialization of role within the framework of the nursing process. Simulated and actual nursing care work experiences will be utilized to apply theoretical concepts. Selected clinical skills will be evaluated in the campus nursing laboratory. Nineteen contact hours: five lecture hours; fourteen laboratory hours (in campus or community agencies).

NUR 1059C Transistional Nursing Process II (O) 6 cr.
Prerequisites: APB 2190C, APB 2191C, MCB 2013C, ENC 1101, ENC 1102, PSY 1012, DEP 2004, and any one of the following: SYG 2000, Humanities (Refer to AS degree General Education requirements), Social Science (Refer to AS degree General Education requirements), and NUR 1052C. Corequisites: any two of the following courses: SYG 2000, Humanities (Refer to AS degree General Education requirements), Social Science (Refer to AS degree General Education requirements). This course is designed for and limited to the Florida licensed practical nurse. The student will use the nursing process in his/her newly developing role when interacting with clients having interruptions in their physical and psychological health. Emphasis is placed on demonstration of knowledge, comprehension, application and analysis of the nursing process. It includes drug and diet therapy. Simulated and actual nursing experiences will be utilized to apply theoretical concepts. Selected clinical skills will be evaluated in the campus nursing laboratory. Eight contact hours: four lecture hours; four laboratory hours (in campus lab or community agencies).

NUR 1200C Nursing Process II Medical Surgical Nursing (O) 10 cr.
Prerequisite: NUR 1040C; Corequisite: DEP 2004. With Nursing I as a foundation, this course moves from the basic patient needs in health maintenance to health problems which require new knowledge and adaptions and includes study of the physical and psychological needs of patients. Emphasis is placed on the essential knowledge, understanding and skills necessary to the nursing care of patients with medical and surgical conditions, and upon the interpersonal process. The four steps of the nursing process will be continued and a higher level of performance will be expected of students. Sixteen contact hours: four class hours; 12 hours of laboratory experience for 16 weeks on campus, in community hospitals and other health agencies.

NUR 2120C Nursing Process IIIB – Nursing Care of Children (O) 6 cr.
Prerequisites: NUR 1040C, NUR 1200C. Corequisites: MCB 2013C, NUR 2133C. With Nursing I and II as a basis, Nursing IIIB encompasses the study of physical and psychological problems of children from infancy through adolescence. The family-centered approach is used in learning the skills needed to care for sick children. The study of pediatric nursing is based on the belief that children, by nature of their growth and development, physical and emotional immaturity, have needs in health and illness different from those of adults. This course is further designed to assist the student to apply knowledge of pediatric nursing in the solving of the common recurring health problem associated with the child through the utilization of the nursing process and the interpersonal process. Nineteen contact hours: five class hours, 14 hours of laboratory experience for 7.5 weeks on campus, in community hospitals, and other health agencies.

NUR 2133C Nursing Process IIIA – Nursing Care of The Childbearing Family (O) 6 cr.
Prerequisites: NUR 1040C, NUR 1200C, APB 2190C, APB 2191C; Corequisites: MCB 2013C, NUR 2120C. With Nursing I and II as a basis, Nursing IIIA encompasses the childbearing cycle as a phase of wellness and continues through the neonatal stage of development. Nursing Care of the Childbearing Family focuses on nursing intervention with families who are experiencing the stresses of the childbearing period. The study of the childbearing family is based on the belief that special needs and problems occurring at designated points in the growth cycle are outgrowths of the developmental level attained by the individual. Emphasis is placed on utilizing nursing and interpersonal processes to identify and meet the physiological and psychological needs of the childbearing family. Both the uncomplicated and the complicated pregnancy are studied, the focus being on the common, recurring problems of this period. Nineteen contact hours: five class hours, 14 hours of laboratory experience for 7.5 weeks on campus, in community hospitals and other health agencies.

NUR 2220C Nursing Process IVA – Medical-Surgical Nursing Care of the Adult Patient (O) 9 cr.
Prerequisites: NUR 1040C, NUR 1200C, NUR 2133C, NUR 2120C; Corequisite: NUR 2310C. This course is a continuation of the study of commonly recurring health problems of patients from the young adult years through senescence with focus on the illness side of the continuum. The nursing process will serve as the basis for nursing care. The student will give nursing care to patients with medical-surgical deviations. Learning experiences will provide opportunities to utilize previously acquired knowledge and skills in giving nursing care and functioning as a team member. Recognizing the special status and needs of the beginning Technical Nurse practitioner, a transitional experience is included in this unit of study. Twenty contact hours: four class hours, 16 hours of laboratory experience (eleven weeks).

NUR 2310C Nursing Process IVB – Psychiatric Nursing (O) 3 cr.
Prerequisites: NUR 1040C, NUR 1200C, NUR 2133C, NUR 2120C; Corequisite: NUR 2220C. This course will build on the mental health concepts presented in each of the previous nursing courses. In varied clinical settings, emphasis will be placed on use of the nursing process in the care of adolescent and adult clients with deviant patterns of behavior.
Nineteen contact hours: five lecture hours; fourteen hours of laboratory experience. (Four weeks.)

OCB – Oceanography: Biological

OCB 2602C Marine Biology (P) 4 cr.
The student will benefit by taking BSC 1011C or High School Chemistry or Physics, or CHM 1040C prior to enrolling in this course. A comprehensive survey of marine ecosystems with emphasis on the local flora and fauna. Laboratory includes collection and identification of marine organisms. Six contact hours: three lecture hours; three laboratory hours.

OMT – Oceanography: Marine Technology

OMT 2211 The Theory and Technology of Marine Field Sampling (D) 3 cr.
Prerequisite: OCB 2602C. A practical introductory course dealing with biological, physical, and chemical field sampling techniques of estuarine and marine environments. This course includes basic biostatistical methods such as (1) measures of central tendency and variability, (2) probability and chi-square, (3) correlation and linear regression, (4) single classification analysis of variance and (5) experimental design and interpretation of results. Also each student must take an active part regarding the proper operation and field maintenance of hydrometers, optical refractometers, salinometers, dissolved oxygen analyzers, pH meters and bathythermographs. Six contact hours: four lecture hours; two laboratory hours.

ORI – Oral Interpretation

ORI 2000 Oral Interpretation (P) 3 cr.
This course consists of critical analysis and appreciation of literature from both the emotional and the intellectual viewpoints; involves the discussion and application of the techniques of oral reading of poetry, prose, and drama; and is designed to enhance the student's appreciation of words, ideas, and beauty in all forms of literature. Three contact hours.

PCB – Process (Cell and Molecular) Biology

PCB 2030 Ecological Crises (P) 3 cr.
This is a course designed to enhance the student's awareness and understanding of the environment and of ecological issues. The course provides an analysis of the interrelationships of the physical and biological factors in natural ecosystems stressing man's interaction and impact on these ecosystems. Three contact hours.

PEL – Physical Education Acts (General) – Object Centered, Land

PEL 1041 Recreational Games (P) 1 cr.
A course designed to introduce the student to the basic skills, rules, and strategy of a variety of recreational games, such as table tennis, deck tennis, horseshoes, paddle tennis and croquet, etc. Two contact hours (activity).

PEL 1111 Beginning Bowling (P) 1 cr.
A course designed to teach the fundamental skills, techniques, and the knowledge necessary for bowling enjoyment. It will prepare the student for recreational and league bowling. Two contact hours (activity).

PEL 1121 Beginning Golf (P) 1 cr.
A beginning course designed to teach the basic golf swing and its application to several clubs. History, rules, golfing etiquette, and simple strategy will be taught. Two contact hours (activity).

PEL 1211 Softball (P) 1 cr.
A course designed for students who wish to broaden their knowledge of softball and improve their game skills. The course will emphasize the history of the game, rules, fundamentals, game skills and strategies. Two contact hours (activity).

PEL 1341 Beginning Tennis (P) 1 cr.
An introductory course covering the history, scoring, game strategy, and basic skills which include footwork, forehand and backhand drives, serve, volley and lob. Two contact hours (activity).

PEL 1342 Intermediate Tennis (P) 1 cr.
The student will benefit by taking PEL 1341 prior to enrolling in PEL 1342. Designed for students who have acquired the basic skills and strategy of tennis and desire to improve their tennis game. Two contact hours (activity).

PEL 1346 Beginning Badminton (P) 1 cr.
Course work is designed to cover history, scoring, basic skills, game strategy and appropriate class tournaments. Two contact hours (activity).

PEL 1511 Soccer (P) 1 cr.
This course is designed to introduce the student to the basic skills, techniques, rules, game play and knowledge of soccer. Two contact hours (activity).

PEL 1622 Advanced Basketball (P) 1 cr.
A course designed to teach skills in basketball. This includes offensive and defensive fundamentals, strategy, rules of basketball, and application of fundamentals, strategy and rules in game situations. Two contact hours (activity).

PEM – Physical Education Acts (General) – Performance Centered, Land

PEM 1101 Physical Conditioning for Women (P) 1 cr.
This course is designed to assist women in becoming stronger, more flexible, better coordinated and more graceful. Included will be a program of planned activities such as selected exercises, use of the Universal Gym set, running, dumbbell drills, rope jumping, and wath drills. Two contact hours (activity).

PEM 1109 Circuit Training (P) 1 cr.
A planned fitness training program to increase muscular strength and endurance through a planned series of exercises. Two contact hours (activity).

PEM 1301 Track and Field Events (P) 1 cr.
The course will include an introduction to the basic skills and knowledge involved in sprinting, distance running, relays, and hurdles. Two contact hours (activity).

PEN – Physical Education Acts (General) – Water, Snow, Ice

PEN 1136 Underwater Diving Skills (SCUBA) (D) 3 cr.
The student will benefit by taking MAT 0024 prior to enrolling in PEN 1136. The scientific study of underwater judg-
ment, attitude, discipline and fitness leading to a Professional Association of Diving Instructors (PADI) certification. This course will stress the latest underwater diving techniques which will be used for making physical and biological collections in the field. The course will include all classroom and pool instruction necessary to qualify students for a national diving certification and open water checkout. Six contact hours; three lecture hours; three laboratory hours.

**PEN 1206 Navigation and Small Boat Handling (D)** 3 cr.
The student will benefit by taking MAT 1033 and High School Trigonometry prior to enrolling in PEN 0266. This is a practical field and lecture course which will emphasize traditional navigation skills, techniques of small boat handling, and radio communications skills. It will also acclimatize the student to all types of shipboard weather conditions. Four contact hours; two lecture hours; two laboratory hours.

**PEO – Physical Education Acts (Professional) – Object Centered, Land**

**PEO 2003 Sports Officiating (P)** 3 cr.
This course is designed to acquaint the student with the techniques of officiating team, individual, and dual sports. Some of the sports covered are baseball, basketball, track and field, volleyball, tennis, and handball. Three contact hours.

**PET – Physical Education Theory**

**PET 2000 Introduction to Physical Education (P)** 3 cr.
Designed for students interested in physical education as a profession. The course examines the place, function, and contribution of physical education within the total educational program. It also includes consideration of the history, philosophy, and problems of physical education. Three contact hours.

**PHI – Philosophy**

**PHI 2100 Introduction to Logic (P)** 3 cr.
This course provides a general introduction to logic that combines an approximately equal emphasis on the uses and misuses of language, deductive reasoning, and inductive reasoning. Some primary objectives are to provide the student with an appreciation of the extent and limitations of human knowledge, and with tools for valid reasoning and critical thinking. Three contact hours.

**PHI 2600 Introduction to Moral and Political Philosophy (P)** 3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. A survey of the efforts made by philosophers to comprehend that portion of experience that is concerned with human values and obligations. The course consists, primarily, of the analysis of selected writings in which philosophers attempt to do such things as characterize the most satisfactory life, specify the basis of moral responsibility, determine the test-ability of moral judgments, and assess the proper relation between the individual and the state. The course includes reading and writing competencies. Three contact hours.

**PHY – Physics**

**PHY 1020 Physics for Liberal Arts (P)** 3 cr.
The student will benefit by taking High School Algebra or MAT 0024 prior to enrolling in PHY 1020. This course is designed as a general education course for the non-science student and not for one who is planning to major in physics or other sciences. It is a survey of the physical environment as applied to mechanics, electricity and magnetism and modern physics. Three contact hours.

**PHY 2048C Physics I with Calculus (P)** 4 cr.
Corequisite: MAC 1311. Subject matter includes mechanics, heat, thermodynamics, and sound. Laboratory work will illustrate important principles and develop techniques. This course uses the Calculus in the subject matter presentations and in the development of problem-solving abilities. It is designed for students majoring in physics, chemistry, and engineering with above-average mathematical background. Six contact hours: three lecture hours; one three-hour laboratory.

**PHY 2049C Physics II with Calculus (P)** 4 cr.
Prerequisite: PHY 2048C. This course is a continuation of PHY 2048C. Subject matter includes electricity, magnetism, light and some areas of modern physics. Laboratory work is similar to and a continuation of the laboratory in PHY 2048C. Six contact hours: three lecture hours; one three-hour laboratory.

**PHY 2053C General Physics I (P)** 4 cr.
Corequisite: MAC 1104; Corequisite: MAC 1114. Subject matter includes mechanics, heat, thermodynamics, and sound. Laboratory work will illustrate important principles and develop techniques. This course will stress problem-solving abilities. It is designed for those students who are majoring in pre-med, pre-dental, pre-veterinary, biological sciences, and geology. Six contact hours: three lecture hours; one three-hour laboratory.

**PHY 2054C General Physics II (P)** 4 cr.
Prerequisite: PHY 2053C. A continuation of PHY 2053C. Subject matter includes electricity, magnetism, light, and some areas of modern physics. Laboratory work is similar to and a continuation of the laboratory in PHY 2053C. Six contact hours: three lecture hours; one three-hour laboratory.

**POS – Political Science**

**POS 2041 American Federal Government (P)** 3 cr.
A study of the theory, organization, principles, and functioning of the Federal Government, emphasizing relationship of the individual to the government. Three contact hours.

**POS 2112 State and Local Government (P)** 3 cr.
A study of state and local forms of government in the United States. The government of Florida is used as an example of activities and patterns of state government. Responsibilities of local government at county and city levels are explored. Three contact hours.

**PSC – Physical Science**

**PSC 1341 Physical Science (P)** 3 cr.
The student will benefit by taking high school algebra or MAT 0024 prior to enrolling in PSC 1341. This course is designed to acquaint the individual with the development of the physical sciences, with the integrating principles and
theories in the physical sciences, with the practice of the scientific method, and with a useful knowledge of selected areas in mechanics, electricity and magnetism, periodicity and atomic structure, and nuclear phenomena. Presentation involves lectures, demonstrations, and films. The course is not designed essentially as an introductory or preparatory course for any specific physical sciences. Three contact hours.

**PSY – Psychology**

**PSY 1012 General Psychology (P) 3 cr.**
An analysis of human behavior by the study of the adoption of the individual to the physical and social environment. Three contact hours.

**QMB – Quantitative Methods In Business**

**QMB 1001 Business Mathematics (D) 3 cr.**
A mathematical treatment of financial problems arising in modern living. The principal purpose of this course is to develop skill in the handling of business transactions. It covers such topics as percentage, inventories and turnover, simple interest and present value, depreciation, and payroll. Three contact hours.

**REA – Reading**

**REA 0305 Developmental Reading 4 cr.**
This course is designed to develop each student's reading skills. The mechanics of reading and the need for selecting a reading method that fits the purpose for reading will undergird an emphasis upon specific individual needs in vocabulary, comprehension, critical reading and rate development. Individualized, self-paced practice in specific skills is provided through laboratory work. This course does not apply toward an associate degree. Five contact hours: three lecture hours; two laboratory hours.

**REA 2205 Reading for Speed and Comprehension (P) 3 cr.**
Prerequisite: REA 0305, or a satisfactory score on placement test. This course is designed for college students, business and professional people, and other adults who would like to increase their reading rate, gain a higher level of comprehension, expand their vocabulary, and improve their test taking skills. Three contact hours.

**REE – Real Estate**

**REE 1000 Real Estate Principles and Practices (D) 3 cr.**
The basic purpose of this course is to provide the student with a broad background of the real estate field and to expose the student to the wide ranging nature of the field. Successful completion of this course and REE 1400 with grades of C (or better) fulfills the educational prelicensing requirements established by the Florida Real Estate Commission to sit for the state examination for a licensed real estate salesperson. Three contact hours.

**REE 1100 Real Estate Appraisal (O) 3 cr.**
This is an intensive course that has been developed to impart a broad understanding of real property appraisal concepts and to teach technical skills employed in their applications to residential properties. It is designed to give the experienced real estate person a basic knowledge of appraisal fundamentals. Three contact hours.

**REE 1400 Real Estate License Law (D) 3 cr.**
This course covers a detailed explanation of Florida Real Estate Law as contained in the Florida Real Estate Handbook. Operation, requirements and procedures of the real estate office are discussed. Successful completion of this course and REE 1000 with grades of C (or better) fulfills the educational prelicensing requirements established by the Florida Real Estate Commission to sit for the state examination for a licensed real estate salesperson. Three contact hours.

**REE 1810 Real Estate Sales (O) 3 cr.**
Modern technique of successful real estate selling, including how to obtain prospects from advertising, showing properties to buyers, obtaining the offer, closing the seller, how to build a personal referral business, financing your real estate sales, and expanding real estate opportunities. Three contact hours.

**REE 2200 Real Estate Finance (O) 3 cr.**
Prerequisite: REE 1000 or Real Estate Salespersons Registration Certificate. Concepts, principles, and practices pertaining to real property finance. Detailed information covering legal aspects of mortgages, brokerage regulations and ethics, all major sources of funds for real estate financing, relevant government agencies, and ownership forms. Three contact hours.

**REE 2220 Home Mortgage Lending (O) 3 cr.**
This course approaches the subject from the viewpoint of the mortgage loan officer who seeks to develop a sound mortgage portfolio. A picture of the mortgage market is presented first, then the acquisition of a mortgage portfolio, mortgage plans and procedures, mortgage loan processing and servicing, and finally the obligations of the mortgage loan officer in overall portfolio management. Three contact hours.

**REE 2270 Mortgage Broker in Mortgage Lending (D) 3 cr.**
This course offers an exposure to the principles and techniques of mortgage financing and brokerage operations and a background study of the Florida Mortgage Brokerage Act. The course prepares the student for the Florida State examination to be a licensed Mortgage Broker. A detailed study of mortgage lending practices is incorporated into the course. Three contact hours.

**REE 2300 Real Estate Investment (O) 3 cr.**
The student will benefit by taking REE 1000 prior to enrolling in REE 2300. This course is designed to familiarize the student with real estate investment fundamentals, depreciation, capital gain and loss and installment sales, non-taxable exchange, ownership forms, commercial leasehold financing, creative financing, financing analysis and projection, land investments, industrial property, shopping centers, office buildings, residential property, mobile home parks, Tax Reform Act of 1976, apartment complexes, and warehouse properties. Three contact hours.

**REE 2430 Real Estate Law (D) 3 cr.**
This course offers suggestions as to types of real estate documents, their form and content, and the mechanics of their use, and contains a full legal, detailed exposition of every aspect of modern real estate transactions. Three contact hours.

**REE 2500 Real Estate Management (O) 3 cr.**
Prerequisite: REE 1000 or Real Estate Salesperson’s or Broker’s Registration Certificate. Comprehensive coverage of property management, with emphasis placed on basic management concepts which can be applied to apartments, commercial buildings, shopping centers, and urban renewal programs, and also on creative management techniques for solving problems. Successful completion of course accepted as equivalency for Institute of Real Estate Management’s course REM 201 as one of the requirements toward Certified Property Manager. Three contact hours.
REL – Religion

REL 2130 Religion and Contemporary Culture (P) 3 cr.
This course analyzes the religious scene in the United States since the Second World War with special emphasis on the 1960's and 1970's. The course will cover the character and changes in American religion since World War II, the rise of sectarian movements, the relation of religion and contemporary social problems, religion and the human potential movement, religion and science, as well as religion and contemporary music and literature. The scope of this course will attempt to put religious trends in the context of the humanities and social science fields. Three contact hours.

REL 2210 Religious Thought in the Old Testament (P) 3 cr.
A study of religious thought and instruction in the Old Testament. Attention is given to the problems of authorship, date, historical setting, and textual criticism. Three contact hours.

REL 2243 Religious Thought in the New Testament (P) 3 cr.
A study of the life and teachings of Jesus, and of the beginning of church life and thought as reflected in the New Testament. Three contact hours.

REL 2300 World Religions (P) 3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. A survey of world religions with emphasis upon Hinduism, Buddhism, Judaism, Christianity, and Islam. This course includes reading and writing competencies. Three contact hours.

RET – Respiratory Therapy

RET 1024 Fundamentals of Respiratory Therapy (D) 4 cr.
An introductory course covering basic respiratory therapy equipment, medical gases, gas therapy, and the respiratory therapy department. Four contact hours.

RET 1244 Emergencies and the Respiratory Therapist (D) 4 cr.
Corequisite: APB 1260 or instructor approval. This course is designed to provide didactic and clinical training in the techniques of first aid, cardiopulmonary resuscitation and emergency respiratory care with primary emphasis on areas pertinent to the respiratory therapist. Four contact hours.

RET 1276 Clinical Skills for the Respiratory Therapist (D) 4 cr.
Corequisite: RET 1024. This course is designed to introduce the student to and train the student in the nursing and rehabilitative skills necessary to provide quality respiratory care. Four contact hours.

RET 1824 Orientation to the Hospital Environment (D) 3 cr.
Prerequisite: permission of the professor. This course provides the student with an introduction to the hospital environment, function of the Respiratory Therapy Department, and the role and responsibilities of the respiratory therapist. Six contact hours (clinical).

RET 2264 Ventilatory Management (D) 4 cr.
Prerequisite: APB 1260 or permission of professor. This course introduces the student to artificial mechanical ventilation; classification of ventilators; indications, contraindications, and side effects of mechanical ventilators and modes of ventilation. Four contact hours.

RET 2272L Respiratory Therapy Clinical Applications (D) 6 cr.
Prerequisite: APB 1260 or permission of professor. This course will allow the respiratory therapy student to be introduced into the hospital departments and situations in which the student may be expected to perform the procedures applicable to this point in the student's education. The performance of these procedures will be closely supervised. Twelve contact hours (clinical).

RET 2273L Clinical Seminar in Intensive Respiratory Care I (D) 1 cr.
Prerequisite: APB 1260; Corequisite: RET 2274L. This course is a weekly clinical symposium dealing with the current practices in intensive respiratory care, relevant medical literature, and patient case studies. Two contact hours (clinical).

RET 2274L Respiratory Intensive Care Practicum I (D) 12 cr.
Prerequisite: RET 2264. This course is designed to provide the student the essential clinical skills necessary to function as a competent respiratory therapist in the critical care areas. Twenty-four contact hours (clinical).

RET 2284C Clinical Seminar in Intensive Respiratory Care II (D) 1 cr.
Prerequisite: APB 1260 and RET 2264. Corequisite: RET 2285. This course is a continuation of the evaluation of current practices in intensive respiratory care, relevant medical literature, and patient case studies. Two contact hours (clinical).

RET 2285L Respiratory Intensive Care Practicum II (D) 12 cr.
Prerequisite: RET 2264. In continuation, this course is designed to provide the student with the essential clinical skills necessary to function as a competent respiratory therapist in the critical care areas. Twenty-four contact hours (clinical).

RET 2414 Pulmonary Function Studies (D) 2 cr.
Prerequisite: APB 1260 or permission of the professor. This course is designed to introduce the student to pulmonary function techniques and the clinical significance of the diagnostic data gained from this form of testing. Two contact hours.

RET 2434 Arterial Blood Gases and Critical Care Monitoring (D) 2 cr.
Prerequisite: APB 1260 or permission of the professor. This course is designed to introduce the student to arterial blood gas analysis and various techniques of monitoring the critically ill patient. Also covered is the interpretation and clinical significance of the data gained from these monitoring techniques. Two contact hours.

RET 2543 Pulmonary Rehabilitation (D) 2 cr.
Prerequisite: APB 1260 or permission of the professor. This course is designed to introduce physiological concepts and therapeutic techniques and procedures involved in the rehabilitation of the pulmonary diseased patient. It is an introduction to an overview of techniques of evaluation utilized in the selection of rehabilitation candidates. Also included are the utilization of techniques and procedures used in chest physiotherapy, associated oxygen therapy, breathing retraining, graded exercise programs, proper aerosol therapy, and IPPB therapy. Two contact hours.

RET 2714 Neonatal and Pediatric Respiratory Care (D) 3 cr.
Prerequisite: APB 1260 or permission of the professor. This course investigates fetal, neonatal, and pediatric differ-
ences in cardiopulmonary anatomy and physiology; pediatric ventilatory management and ventilatory equipment; neonatal and pediatric cardiopulmonary pathologies; and adaptations of respiratory care techniques to pediatric patients. Three contact hours.

RMI – Risk Management and Insurance

RMI 1030 Principles of Insurance (D) 3 cr.
This course will seek to develop principles that can be used in understanding insurance companies, contracts, and practices. The approach will be essentially functional. Emphasis will be on the presentation principles and explanations of practices. Methods of comparing the relative cost will be presented. (This course as taught on the Fred H. Kent Campus prepares the student for the General Agent Examination. As taught on the South Campus, it prepares the student for the IIA Insurance Certificate). Three contact hours.

RMI 1140 Principles of Life Insurance I (D) 3 cr.
This course is an introduction to the principles of life insurance, the basic life insurance plans, and the more common types of individual life insurance contracts. It also includes a survey of industrial life insurance, health insurance, and group life insurance, and it constitutes a general survey of the major kinds of personal insurance coverages available. Three contact hours.

RMI 1160 Marketing Principles of Life and Health Insurance (O) 3 cr.
A new approach toward the life and health insurance industry, its products, the market potential, and the industry as a selling career. Three contact hours.

RMI 1200 Principles of Casualty Insurance and Surety Bonding (D) 3 cr.
Prerequisite: RMI 1030. This course is an introduction to the eight areas of automobile liability and physical damage insurance, workmen’s compensation and employers’ liability insurance, business, professional and personal liability insurance; fidelity and surety bonds, theft coverages, multiple-line trends and coverages, health insurance, and miscellaneous casualty coverages. (This course as taught on the Fred H. Kent Campus prepares the student for the General Agent Examination. As taught on the South Campus, it prepares the student for the IIA Insurance Certificate) Three contact hours.

RMI 1210 Principles of Fire and Allied Lines (D) 3 cr.
Prerequisite: RMI 1030. This course is an introduction to the four areas of fire, ocean marine and inland marine insurance and multiple-line coverage. For each of these four areas, specimen contracts are examined. Each area is discussed with regard to the perils, property, losses, persons, locations, time and hazards which are covered. (This course as taught on the Fred H. Kent Campus prepares the student for the General Agent Examination. As taught on the South Campus, it prepares the student for the IIA Insurance Certificate) Three contact hours.

RMI 1260 Principles of Insurance and Liability Claim Adjusting (O) 3 cr.
Corresponds to Part II of the Insurance Institute of America course in Adjusting. Examines the principals and practices of adjusting liability claims. Three contact hours.

RMI 1280 Principles of Property Insurance Adjusting I (O) 3 cr.
This course is an introduction to the general principles of insurance and property loss of adjusting. The following areas are covered: risk and insurance, suretyship, risk management principles of law and the insurance transaction, the insurance contract-limitations on coverage and limitations on amount of loss, the procedure, investigation, and reports of adjustment of property losses, and estimating business losses. Three contact hours.

RMI 1430 Legal Aspects of Life Insurance (O) 3 cr.
Corresponds to Part III of the Life Office Management Association (LOMA) Insurance Education Program. An up-to-date presentation of the law of life insurance contracts for the person whose principal interest is life insurance rather than law. Three contact hours.

RMI 1452 Life Company Operations (O) 3 cr.
Corresponds to Part II of the Life Office Management Association (LOMA) Insurance Education Program. Covers life insurance home office organization, regulation, taxation, and mathematical aspects, as well as the marketing and investment functions. Three contact hours.

RMI 2270 Liability Insurance Adjusting (O) 3 cr.
Covers the concepts of legal duty, breach of legal duty, and concepts of damages. Introduction to medical knowledge needed by adjusters, study of adjuster-lawyer and adjuster-physician relationships, and settlement of workmen’s compensation claims. Presumes a knowledge of the subject matter of RMI 1200 and RMI 1260. Three contact hours.

RMI 2281 Property Insurance Adjusting (O) 3 cr.
Covers in more depth than previous courses in the program the subject of appointment, insurable interest, limitation on insurer’s liability, and estimating. Special consideration is given to adjustment of building, merchandise and fixture losses, and business interruption insurance losses. Presumes a knowledge of the subject matter of RMI 1280 and RMI 1260. Three contact hours.

RMI 2750 Life Insurance Accounting (O) 3 cr.
Corresponds to Part IV of the Life Office Management Association (LOMA) Insurance Education Program. Covers the principles of bookkeeping and accounting as an aid in understanding the life insurance accounting practices. Three contact hours.

RTE – Radiologic Technology

RTE 2202 Radiologic Management and Education (O) 3 cr.
Prerequisite: proof of current registration with the American Registry of Radiologic Technology. This course is designed to familiarize the radiologic technologist with the latest advances in the health care field in general, with specific emphasis on the areas of management and education that relate to the profession of radiologic technology. Three contact hours.
RTE 2587 Advanced Developments in Radiologic Technology (O) 3 cr.
Prerequisite: proof of current registration with the American Registry of Radiologic Technology. This course is designed to familiarize the radiologic technologist with the latest advances in Radiologic Technology. Such topics as radiation protection, image intensification, heart catheterizations, three-phase circuitry, ultra-sound, cross-section anatomy, computerized tomography, special procedures, radiation therapy and contrast media will be explored. Four contact hours (lecture/activity).

RTV - Radio - Television

RTV 2001C Introduction to Broadcasting (P) 3 cr.
An introduction to the historical, cultural, social, legal, business and career aspects of radio and television broadcasting plus an introduction to the types and sub-types of broadcast media. Five contact hours: three lecture hours; two laboratory hours.

RTV 2200C An Introduction to Television Production (D) 3 cr.
The course provides an opportunity for students to become familiar with the basic operation of a television studio. The course will help students prepare for an entry-level position in a local TV station or production facility, as well as for continuation in a communications or journalism course of study. Four contact hours: two lecture hours; two laboratory hours.

RTV 2206C Broadcast Direction (D) 3 cr.
Prerequisite: RTV 2200C, or professor's approval. This course is a continuation of RTV 2200C. It is intended for broadcast majors. Major topic is the direction of TV programs. Four contact hours: two lecture hours; two laboratory hours.

RUS - Russian Language

RUS 1100 Beginning Russian I (P) 3 cr.
This course consists of pronunciation, elements of grammar, simple conversation, exercises, reading, and composition. Visual and auditory aids are employed. Four contact hours: three lecture hours; one unsupervised laboratory hour.

RUS 1101 Beginning Russian II (P) 3 cr.
Prerequisite: RUS 1100 or equivalent. A continuation of RUS 1100. Four contact hours: three lecture hours; one unsupervised laboratory hour.

SES - Secretarial Studies

SES 1100 Beginning Typewriting I (D) 3 cr.
A course designed for the student who has little or no typewriting experience. The major objectives of the course are to learn the keyboard and to develop correct typewriting techniques. Tabulations, vertical and horizontal centering, and personal letters are introduced. Three contact hours.

SES 1101 Beginning Typewriting II (D) 3 cr.
Prerequisite: SES 1100 or consent of the professor. A study of the touch system of typewriting and the application of the basic skills to business letters, reports, and tabulated problems. (Students who have satisfactorily completed one year of high school typewriting should enroll in SES 1110, Intermediate Typewriting.) Three contact hours.

SES 1110 Intermediate Typewriting (D) 3 cr.
Prerequisite: SES 1101 or one year of high school typewriting. Emphasizes speed building, improvement of basic techniques, production typing of letters, tabulation, reports, manuscripts, and office problems. Three contact hours.

SES 1150 Introduction to Word Processing (O) 3 cr.
Prerequisites: SES 1110, Intermediate Typewriting or demonstration a typewriting speed proficiency of 40 words per minute for five minutes on straight copy and SES 1171 Machine Transcription or six months work experience with an office record dictation system. Word Processing is the application of modern technology and systems management techniques to create a system for the production of typewritten documents in the modern office. This course provides the student with an overview of the system, which includes personnel, procedures, and equipment. Three contact hours.

SES 1171 Machine Transcription (O) 3 cr.
Prerequisite or corequisite: SES 1330, SES 1110 or ability to type 35 words per minute for five minutes on straight copy. This course provides intensive practice in machine transcription techniques including language and vocabulary skills and production typewriting. The development of facility in using appropriate office reference manuals is also emphasized. Three contact hours.

SES 1210 Beginning Shorthand (D) 3 cr.
A beginning course in the principles of Gregg shorthand with some dictation and transcription practice. Students with no typewriting skill should take SES 1100 concurrently with SES 1210. (Students who have satisfactorily completed one year of high school shorthand should enroll in SES 1211.) Three contact hours.

SES 1211 Intermediate Shorthand (D) 3 cr.
Prerequisite or corequisite: SES 1101, SES 1330 or ability to type 25 words a minute for three minutes on straight copy. Prerequisite: SES 1210 or ability to take dictation at 50 words a minute. A continuation of Gregg shorthand with increased practice in dictation and transcription. (Students who have satisfactorily completed two years of high school shorthand should enroll in SES 2212, Advanced Shorthand.) Three contact hours.

SES 1324 Calculating Machines (D) 3 cr.
This course emphasizes financial situations arising in offices, with the principal purpose of handling business transactions skillfully; such transactions as adding, subtracting, multiplying, dividing, percentages, constants, simple interest, common decimal fractions, mixed numbers, increases and decreases, discount, follow-up, simple income tax returns, invoicing, and accounts receivable and payable, system calculations. Development of the touch operation skill using ten-key electronic calculators with memories (display and tape), involving the above mathematical problems by using a textbook and practice sets. Three contact hours.

SES 1330 Business English (O) 3 cr.
Prerequisite or corequisite: ENC 1101. Course content includes the study of grammar, punctuation, spelling, and vocabulary and applications and rules as applied to business writing. In addition, rules pertaining to number usage, word division and choice, and possessives will be taught for the practical application of business English. Proofreading and editing written business copy, listening and reading skill development, and using business reference manuals are incorporated in this course. Three contact hours.

SES 1401 General Office Procedures (D) 3 cr.
Prerequisite: SES 1101 or ability to type 35 words per minute for five minutes straight copy. A course designed to prepare the student for office functions such as communication skills (routine mail procedures, telephone techniques, and receptionist skills), office mathematics, records management, duplicating, human relations, and other general clerical skills. Three contact hours.
SES - Secretarial Studies

SES 2133 Advanced Typewriting – Technical (O) 3 cr.
Prerequisite: SES 1110 or ability to type 45 words a minute for five minutes on straight copy. This is an advanced typewriting course designed to give secretarial science students background and practice in secretarial science. The course includes intensive practice in the typing of technical material which includes equations, chemical structures, tables and illustrations. The techniques of technical typing and the format of technical report typing are included. Three contact hours.

SLS - Student Life Skills

SLS 1223 Stress in Today's Society (P) 3 cr.
This course is designed to acquaint the student with the nature and scope of stress in today's society. The causes and methods of prevention will be examined from a lay perspective. General environmental and social stressors which affect all people to some degree will be discussed. A laboratory experience utilizing various relaxation techniques which may aid the student in coping with everyday stress will be offered. Four contact hours; two lecture hours; two laboratory hours.

SOP - Social Psychology

SOP 1002 Human Relations (P) 3 cr.
Drawing from several areas of behavioral science, the course is designed for students in business and technical fields. Also suitable for general education and personal enrichment; not recommended for the student who plans to major in psychology. Includes group dynamics, leadership, ethics, motivation and morale, social systems, formal and informal organizations; and other selected topics. Three contact hours.
SOP 1502  Dynamics of Behavior (P)  3 cr.
Theory and practice in solving problems of interpersonal relations and self-development through group and individual experiences. Three contact hours.

SPA – Speech Pathology and Audiology

SPA 1336  Manual Communications I (D)  3 cr.
This course will provide the student with the vocabulary to communicate with hearing-impaired individuals. Upon conclusion of this course, the student will have acquired the ability to use the Manual Alphabet and approximately 1,200 signs. Expressive skills will be emphasized. Methodology will be basically laboratory in nature; most classroom work will be devoted to practice in and reinforcement of correct hand configurations and position. Three contact hours.

SPA 1337  Manual Communications II (D)  3 cr.
This course will present American Sign Language (Ameican), which is the idiomatic and "dialectic" language used by the hearing-impaired. The specialized sentence structure, grammar, and usage of this language will be learned. Guest hearing-impaired students on campus will be invited for dialogue. Practice for receptive skills will be emphasized. Three contact hours.

SPA 1360  Psycho-Social Aspects of Deafness (D)  3 cr.
This course considers effects of prelingual and postlingual deafness or hearing impairment on the psychological and emotional development and adaptation of the individual to deafness. Covered are cognitive and linguistic development, personality, interpersonal behavior and social reactions and possible compensatory processes in other sensory systems of the body. Three contact hours.

SPC – Speech Communication

SPC 1010  Fundamentals of Speech Communication (P)  3 cr.
Prerequisite: satisfactory score on placement test. This course focuses on speaking and listening skills that are designed to instruct in the principles and procedures that promote effective communication. This study includes message composition involving idea and information acquisition, determination of purpose, and analysis of audience. Also included are message transmission involving vocal variations, articulation and appropriate levels of language usage, and listening for both literal and critical comprehension. Three contact hours.

SPC 2420  Discussion (P)  3 cr.
Emphasis will be on the development of discussion skills in four areas: (1) the format of a discussion; (2) the means of discussion, reasoning, evidence and cooperative idea development; (3) both leadership and participation conduct; (4) audience analysis and listening techniques. Three contact hours.

SPC 2594  Intercollegiate Debate (P)  1 cr.
Prerequisite: consent of professor. Analysis of proposition of fact, policy and definition; library research methods, formal debate structure and participation in intercollegiate debate. Three contact hours (studio/rehearsal).

SPN – Spanish Language

SPN 1100  Beginning Spanish I (P)  3 cr.
A beginning course. The fundamentals of Spanish speech and grammar will be taught by integrating the basic communication skills of hearing and understanding, speaking, reading, and writing. Four contact hours: three class hours; one unsupervised laboratory hour.

SPN 1101  Beginning Spanish II (P)  3 cr.
Prerequisite: SPN 1100 or equivalent. A continuation of SPN 1100. Four contact hours. Three class hours; one unsupervised laboratory hour.

SPN 2200  Intermediate Spanish I (P)  3 cr.
Prerequisite: SPN 1101. A thorough review of the principles of grammar will be integrated with compositions and conversations planned to develop a basic active vocabulary and facility in communicating in written and spoken Spanish. Readings in Spanish will be concerned with a survey of the history and culture of Spain and Hispanic America. Four contact hours: three lecture hours; one unsupervised laboratory hour.

SPN 2201  Intermediate Spanish II (P)  3 cr.
Prerequisite: SPN 2200. A continuation of SPN 2200. Four contact hours: three lecture hours; one unsupervised laboratory hour.

SSI – Social Sciences, Interdisciplinary

SSI 1110  Origins of American Society I (P)  3 cr.
An examination of the mainsprings of the civilization of the United States. The course is designed to relate America's values, institutions, and ideals to both her domestic situation and to her leadership in the world through the historical approach. Emphasis is on the concept of culture, the genesis of American society, and primary institutions. Three contact hours.

SSI 1120  Origins of American Society II (P)  3 cr.
A continuation of SSI 1110 with emphasis on American political institutions, American economic institutions, and America’s leadership in the world. A study of the United States Constitution is included in this course. Three contact hours.

STA – Statistics

STA 1014  Elementary Statistics (P)  3 cr.
Prerequisite: MAC 1104, with a grade of C or better. This is an introductory course which includes the following topics: probability, random variables and probability distributions, binomial and normal distribution, statistical inference, linear regression and correlation, variance, and inference from small samples. Also included is a module on logic and computer literacy which must be covered by the student independently of class time to meet the college-level skills requirement. Three contact hours.
SUR – Surveying: Related Areas

SUR 1101C Surveying I (D) 3 cr.
Prerequisites: MAC 1114, ETD 1100C. A study of the fundamentals of basic surveying together with related field work in the use of instruments and tables. Investigation and calculations regarding land area, traverses, standard deviations and errors will be emphasized. Four contact hours: two lecture hours; two laboratory hours.

SUR 2140C Surveying II (D) 4 cr.
Prerequisite: SUR 1101C. The course consists of a study of the theory and practice of surveying with emphasis on electronic distance measurement, topographic surveying, land surveying, surveying astronomy, and curves. The course includes lectures, preparation of drawings, computing laboratory, and field practice. Four contact hours: two lecture hours; two laboratory hours.

SYG – Sociology, General

SYG 2000 Introductory Sociology (P) 3 cr.
A study of sociological concepts, theories, and methods; social groups, processes, and change. Three contact hours.

SYG 2010 Social Problems (P) 3 cr.
Prerequisite: SYG 2000. A consideration of major social problems which affect individuals and groups in industrial societies, with attention to American society. Three contact hours.

SYG 2430 Marriage and Family (P) 3 cr.
A study of mate selection, courtship, marriage and child rearing, with special attention to the contemporary American family. Three contact hours.

TAX – Tax

TAX 2000 Individual Taxes (O) 3 cr.
This course is a study of the Federal Revenue Code regulations and cases which apply to the determination of income taxes for individuals. Topics considered will be the preparation of the tax return form 1040 and appropriate supplemental forms. This course is recommended for Accounting, Associate in Science students. Three contact hours.

TAX 2010 Corporate, Estate and Trust Taxes (O) 3 cr.
This course is a study of the Federal Internal Revenue Code regulations and cases which apply to the determination of income taxes for corporations, estates, and trusts. Topics covered will be the preparation of the returns and supplemental forms for corporations, estates, and trusts. This course is recommended for Accounting, Associate in Science students. Three contact hours.

THE – Theatre

THE 1000 Introduction to Theatre (P) 3 cr.
Prerequisite: ENC 1101 or satisfactory score on placement test. An introductory course in the study of dramatic art as presented upon the stage. The course includes theatre organization, stage techniques, fundamental dramaturgy, and a survey of theatre architecture in Western Civilization. The course includes reading and writing competencies. Three contact hours.

THE 2925 Drama Practicum (P) 1 cr.
Planning and execution of production functions; scene construction and painting, props, costume, lighting and other full technical responsibilities. Three contact hours (studio/rehearsal).

TRA – Transportation

TRA 1010 Principles of Transportation (D) 3 cr.
An introduction to transportation. A study of the characteristics, development, economic aspects, regulations, services, and problems relating to rail, motor, air, pipeline, and water transportation. Three contact hours.

TRA 1032 Transportation and Traffic Management I (D) 3 cr.
Developments leading to national legislation and federal regulation; division of territories, official descriptions, etc.; scope of authority of territorial associations; factors controlling traffic flows, basis governing classification rules, principles of freight rates and tariffs and elements of rate making, shipping documents and their application, outline of special freight services, and freight claims. Three contact hours.

TRA 1033 Carrier Liability and Claims (D) 3 cr.
Analysis of carrier's liability for goods. Rights and liabilities of carriers, consignees, and consignors; claim procedures, claim prevention and government regulation. Three contact hours.

TRA 1100 Transportation and Traffic Management II (D) 3 cr.
Application of tariff circulars; construction and filing of tariffs; tariff compilation; freight rates and tariffs, special freight services, i.e., switching, terminal facilities, demurrage and storage, average agreement, reconsignment and diversions, various transit privileges; embargoes; warehousing and distribution; and materials handling. Three contact hours.

TRA 1121 Rate Clerk (D) 3 cr.
Basic course of tariffs and rate structures. Included are descriptions of rate territories, how various freight is classified by each mode of transportation, and how to apply applicable tariffs. Course is designed to instruct new rate clerks in selection of lowest costs that will provide required shipping service. Also included are rules of tariffs, rate making procedures, and use of shipping documents. Three contact hours.

TRA 1230 Material Handling (D) 3 cr.
An introduction to the field of material handling, including an analysis of jobs and career opportunities, general description of qualifications for entry-level positions, shipping and receiving procedures, warehousing problems and inventory control. The course is designed to present the entire field of material handling, from the producer-manufacturer to the ultimate user-consumer. Three contact hours.

TRA 1420 Commercial Motor Transportation (D) 3 cr.
General introduction to commercial motor operations, highway and highway financing, equipment, types of operations, financing motor carriers, labor relations, terminal operation, claims, insurance, classification, rates, regulations of motor carriers, commission policy, intercity passenger operations, urban mass transit, and economics of commercial motor transportation. Three contact hours.

TRA 1905 Independent Study of Transportation (D) 3 cr.
This course is designed to introduce the student to the ever broadening area of transportation literature and to cause the student to report the student's findings after a careful study and research into an area of personal interest. Acceptable thesis procedures must be used. The course has no prerequisites. Three contact hours.
TRA 2020 Economics of Transportation (D) 3 cr.
This course covers developments in the transportation industry; decisions of the courts and regulatory bodies; new technological developments; railroad management policies; adjustment of rates; public policy questions; and major problem regulation. Completion of this course partially covers requirements for certification by the American Society of Transportation and Traffic. Three contact hours.

TRA 2110 Transportation and Traffic Management III (D) 3 cr.
This course covers through routes and through rates, application of arbitraries and differentials, advanced milling in transit, import and export traffic, technical tariff and rate interpretation, advanced claim adjustments, and rate and classification committee procedures. Three contact hours.

TRA 2120 Transportation and Traffic Management IV (D) 3 cr.
A general discussion of the construction and application of the Interstate Commerce Act and practice before the Interstate Commerce Commission. Three contact hours.

TRA 2300 Interstate Commerce Act I (D) 3 cr.
The history and development of transportation in the United States. Problems which led to the regulation of commerce through legislative action, underlying principles of the Act, interpretation and application of the Interstate Commerce Act. Three contact hour.

TRA 2310 Interstate Commerce Act II (D) 3 cr.
A continuation of Interstate Commerce Act I. This course provides an in-depth study of the Act, to include: areas of jurisdiction, meanings and interpretations of the Act, methods used to enforce the Act, contracts and agreements among carriers-shippers, carriers' tariff, liability, statute of limitations, rate classification, and regulations. Three contact hours.

TRA 2311 Interstate Commerce Law and Practice (D) 3 cr.
This course considers all aspects of interstate commerce law and practice. Topics include review of Interstate Commerce Act, general rules and practice, Interstate Commerce Commission, and Supreme Court cases. Three contact hours.

TRA 2312 Interstate Commerce Act III (D) 3 cr.
A continuation of Interstate Commerce Act I & II. Topics include: formal and informal complaints, general conduct of hearings, developing facts of case, compulsory testimony, immunity of witnesses, briefs, oral arguments, and report of the commission. Three contact hours.

TRA 2313 Interstate Commerce Act IV (D) 3 cr.
Continuation of Interstate Commerce Act III. Topics include: review of previous material, measure of damages, statutory authority, evidence to prove damage, discrimination, and issuance and preparation of the student's personal application to take the Practitioner Examination. Three contact hours.

ZOO – Zoology

ZOO 1010C General Zoology (P) 4 cr.
The student will benefit by taking APB 1150 or BSC 1011C or High School Biology prior to enrolling in ZOO 1010C. This is a survey of the animal kingdom with emphasis on taxonomy, life cycles, evolution, organ systems, and phylogenetic relationships. A representative of each of the major groups will be discussed and investigated. Six contact hours: three lecture hours, three laboratory hours.

ZOO 2713C Comparative Anatomy (P) 4 cr.
Prerequisite: ZOO 1010C. A comprehensive survey of the anatomy of chordates with emphasis on the functional morphology of vertebrates. Students are required to dissect and study preserved specimens of lamprey, dogfish, yellow perch, mud-puppy, pigeon and cat. Six contact hours: three lecture hours; three laboratory hours.

Special Series Courses

Cooperative Education

COE 1000 Cooperative Education Seminar (P) 1 cr.
The seminar is designed to prepare the student for entry into the Cooperative Education Program. During the seminar, the student will receive career counseling, job orientation and placement. One contact hour.

Prefix will be assigned according to student work experience.

-- 1949 Cooperative Education Work Experience I (P) 3 cr.
The first work experience in Cooperative Education is designed to provide the student with meaningful experiences that will enhance the student's college education through career exploration and job training. Forty contact hours.

Prefix will be assigned according to student work experience.

-- 2949 Cooperative Education Work Experience II (P) 3 cr.
The second work experience in Cooperative Education is designed to provide the student with further meaningful experiences that will enhance the student's college education through career exploration and job training. Forty contact hours.
Non-College Credit Information

Admissions

All persons registering at Florida Junior College at Jacksonville must have a social security number and will be required to present the social security card at each registration. Persons not having a social security number should contact the local Social Security Office for an application to obtain a number.

An individual desiring to enroll in non-college credit programs should contact the administrator of the center or the campus offering the desired subjects and may be admitted if the following eligibility requirements are met:

1. Be an adult — by Florida School Law, at least 16 years of age.
2. Present Social Security card.
3. Furnish proof of age, if asked.
4. Complete the admission and registration forms requested.

Non-resident aliens may enroll in non-college credit classes; however, Florida Junior College at Jacksonville will not issue immigration papers based on this enrollment.

Students wishing enrollment certification for educational benefits must be admitted to and be enrolled full-time in the diploma-seeking high school program (20 clock hours per week minimum) or vocational program (30 clock hours per week minimum).

Registration Periods

Non-college credit registration periods for any term shall begin and end on dates specified by the President. Non-college credit registration dates will vary by program category and campus and may be continuous throughout any term. The terms for non-college credit classes will be Fall, Winter, and Summer (I, II, III).

Schedule Changes

Schedule Changes, commonly known as Add-Drop, will be allowed for high school and vocational courses only in accordance with the schedule established by the Registrar each term. Schedule changes will not be allowed for all other non-college credit courses.

Transcript Requests

Upon request of the student, the College will provide to the student, or to a person or institution designated by the student, an official transcript of the student's academic record. Transcript requests may be made in person or in writing to the Campus Registration Office. No transcript request will be accepted by telephone.

NO TRANSCRIPT REQUEST WILL BE PROCESSED UNTIL ALL FINANCIAL OBLIGATIONS TO THE COLLEGE ARE CLEAR

Students are advised to make requests approximately two weeks before the transcript is needed.

Awards for Program/ Course Completion

Three types of certificates are awarded to students in recognition of completion of program and/or course competency requirements.

Certificate of Applied Science
The Certificate of Applied Science is awarded to students who have enrolled in and satisfactorily completed the requirements for a one-year vocational competency-based program of study in preparation for employment. The area or areas of competencies completed by the student are indicated on the certificate. Before a student may receive this certificate, the student must have fulfilled all financial obligations to the College.

Certificate of Training
The Certificate of Training is awarded to students who have enrolled in and satisfactorily completed competencies in a vocational program of study of one term (semester) or less in preparation for employment. The program completed by the student is indicated on the certificate. Before a student may receive this certificate, the student must have fulfilled all financial obligations to the College.

Certificate of Attendance
This is a general purpose type of certificate used to verify the attendance of an individual in a course, seminar, or workshop-type activity. Attainments of an individual in these instructional activities may be indicated on the certificate as prescribed by the requirements of the activity.

Continuing Education Units (CEU)
Many courses award Continuing Education Units. The CEU system provides for one unit to be awarded for every 10 clock hours of instruction. A record of courses taken and CEU's earned will be maintained by the College. A student may obtain a copy of the record or have a copy mailed to a person of the student's choice by requesting such in writing in the Campus Registration Office.
## Financial Information

### Student Fees and Tuition

#### Occupational Education

## Non-College Credit Registration Fees*

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*NOTE: Fees listed herein are subject to amendment due to legislative budget constraints or as otherwise deemed appropriate by the College. Current fees shall be posted at the time of any given registration.
<table>
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<th>Course Code</th>
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**Health Education**

- EMS 0065; MLS 0930; NUR 0512A: $5.00
- EMS 0731, EME 0024; EMS 0381: $10.00
- DEA 0912; EMS 0391; RTE 0010;
  - EMS 0120: $15.00
- EMS 0119: $20.00
- EME 0010: $30.00
- NUR 0512A: $40.00
- NUA 0310R: $55.00
- MEA 0310R, STO 0310: $240.00
- PRN 0310: $295.00

**Home Economics Education**

- CHD 0020; CLT 0330A; FAR 0010, 0012; FON 0010, 0015, 0020;
  - FSM 0315, 0330, 0525;
  - HOF 0010: $5.00
- SEM 0010A; CGC 0015, 0020, 0025;
  - CLT 0144, 0312A, 0313B;
  - CMP 0510C, 0512, 0517;
  - FON 0002, 0104, 0518; HEE 0110;
  - HEF 0102, 0104, 0105: $10.00
- FAR 0008: $10.00
- FON 0007, 0109, 0110; FSM 0317, 0320, 0322, 0510; HOF 0001: $15.00
- CLT 0312G, 0313C; 0515, 0516, 0520; FON 0003; FSM 0312, 0511, 0514; HEF 0101; HOF 0002: $20.00
- HEF 0103: $20.00
- CHD 0100; CMP 0514: $25.00
- CGC 0011; CLT 0311, 0314; CMP 0506;
  - FSM 0520, 0525; FSM 0522: $25.00
- HEF 0310; HOF 0005: $30.00
- INM 0010: $35.00
- FSM 0318: $40.00
- HEF 0312, 0313: $45.00
- FSM 0314: $75.00

**Trade-Industrial Education**

Students are required to furnish their personal hand tools for the Trade-Industrial courses for which they are enrolled.

**Auto Body Repair**

- ABF 0109N, 0110N, 0111N: $55.00
- ABF 0109R, 0110R, 0111R: $110.00

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<table>
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<tr>
<th>Service</th>
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<td>$110.00</td>
<td>$220.00</td>
</tr>
<tr>
<td><strong>Automotive Machine Shop</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSH 0318N, 0319N, 0320N</td>
<td>$55.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>MSH 0318R, 0319R, 0320R</td>
<td>$110.00</td>
<td>$220.00</td>
</tr>
<tr>
<td><strong>Marine Outside Machinist I</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSH 0321N, 0322N, 0323N</td>
<td>$55.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>MSH 0321R, 0322R, 0323R</td>
<td>$110.00</td>
<td>$220.00</td>
</tr>
<tr>
<td><strong>Plumbing and Pipefitting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPF 0309N, 0310N, 0311N</td>
<td>$55.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>PPF 0309R, 0310R, 0311R</td>
<td>$110.00</td>
<td>$220.00</td>
</tr>
<tr>
<td><strong>Marine Pipefitting</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPF 0320N, 0321N, 0322N</td>
<td>$55.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>PPF 0320R, 0321R, 0322N</td>
<td>$110.00</td>
<td>$220.00</td>
</tr>
<tr>
<td><strong>Sheet Metal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHM 0309N, 0310N, 0311N</td>
<td>$55.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>SHM 0309R, 0310R, 0311R</td>
<td>$110.00</td>
<td>$220.00</td>
</tr>
</tbody>
</table>

*NOTE: Fees listed herein are subject to amendment due to legislative budget constraints or as otherwise deemed appropriate by the College. Current fees shall be posted at the time of any given registration.
<table>
<thead>
<tr>
<th>Course Details</th>
<th>Florida Resident</th>
<th>Non-Florida Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Welding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 0309N, 0310N, 0311N</td>
<td>$55.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>WEL 0309R, 0310R, 0311R</td>
<td>$110.00</td>
<td>$220.00</td>
</tr>
<tr>
<td><strong>Marine Welding</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL 0320N, 0321N, 0322N</td>
<td>$55.00</td>
<td>$110.00</td>
</tr>
<tr>
<td>WEL 0320R, 0321R, 0322R</td>
<td>$110.00</td>
<td>$220.00</td>
</tr>
<tr>
<td><strong>Employer's Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIO 0020, 0024; BCN 0010</td>
<td>$10.00</td>
<td>$10.00</td>
</tr>
<tr>
<td>AIO 0022; DTG 0312; ELS 0012, 0019, 0120; PTY 0312</td>
<td>$20.00</td>
<td>$20.00</td>
</tr>
<tr>
<td>AIC 0003, 0390; AUM 0003, 0390, 0395; BLK 0312, 0390; CAP 0395; DIM 0109, 0395; ELS 0390, 0410; ENR 0003, 0010; ERE 0110; FMD 0010, 0390, 0395; IEL 0316, 0390; MAO 0390; MAY 0312; MEY 0390; MSH 0003, 0390; MTY 0390, 0395; PCL 0390; PAF 0390, 0395; RTV 0390; SHM 0390</td>
<td>$25.00</td>
<td>$25.00</td>
</tr>
<tr>
<td>AIC 0315; BCN 0315; CAD 0315; CEQ 0115; IEL 0315, 0317; MAY 0315; ROO 0317; SHM 0315, PPF 0315, PDE 0317</td>
<td>$25.00</td>
<td>$50.00</td>
</tr>
<tr>
<td>AIM 0010, 0012, 0014</td>
<td>$30.00</td>
<td>$30.00</td>
</tr>
<tr>
<td>DIM 0390</td>
<td>$35.00</td>
<td>$35.00</td>
</tr>
<tr>
<td>WEL 0390</td>
<td>$45.00</td>
<td>$45.00</td>
</tr>
<tr>
<td>PDE 0315</td>
<td>$50.00</td>
<td>$50.00</td>
</tr>
<tr>
<td><strong>Public Service Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APC 0221</td>
<td>$30.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>COR 0418</td>
<td>$80.00</td>
<td>$160.00</td>
</tr>
<tr>
<td>FIF 0422</td>
<td>$75.00</td>
<td>$150.00</td>
</tr>
<tr>
<td>LAE 0310</td>
<td>$130.00</td>
<td>$260.00</td>
</tr>
<tr>
<td>SEO 0210*</td>
<td>$15.00</td>
<td>$30.00</td>
</tr>
<tr>
<td>APM 0221; APS 0222; LAE 0411, 0417; SAN 0115; APS 0224</td>
<td>$25.00</td>
<td>$25.00</td>
</tr>
<tr>
<td>COR 0425, 0426; FIF 0411, 0415, 0420; LAE 0410, 0422; LAE 0525, 0526, 0527; SOW 0010; FIF 0420</td>
<td>$15.00</td>
<td>$15.00</td>
</tr>
<tr>
<td>FIF 0310, 0311, 0312, 0313, 0314, 0315, 0316, 0413, 0417, 0418, 0419, 0424</td>
<td>$10.00</td>
<td>$10.00</td>
</tr>
<tr>
<td><strong>Agriculture</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGG 0310</td>
<td>$155.00</td>
<td>$310.00</td>
</tr>
<tr>
<td>ORH 0010</td>
<td>$10.00</td>
<td>$10.00</td>
</tr>
</tbody>
</table>

*Plus $15.00 Materials Fee.

*NOTE: Fees listed herein are subject to legislative budget constraints or as otherwise deemed appropriate by the College. Current fees shall be posted at the time of any given registration.
Professional Malpractice and Liability
Insurance Risk Coverage Fees

<table>
<thead>
<tr>
<th>Non-College Credit Courses</th>
<th>Per Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmetology COY 0309, 0310, 0311</td>
<td>$ 5.00</td>
</tr>
<tr>
<td>Medical Assisting MEA 0310</td>
<td>$ 7.00</td>
</tr>
<tr>
<td>Nurse Assistant NUA 0310</td>
<td>$ 4.00</td>
</tr>
<tr>
<td>Practical Nurse PRN 0310</td>
<td>$14.00</td>
</tr>
<tr>
<td>Post Graduate Dental Hygiene Clinic DEH 0912</td>
<td>$ 7.00</td>
</tr>
<tr>
<td>Surgical Technician STO 0810</td>
<td>$ 7.00</td>
</tr>
<tr>
<td>Fire Fighter Min.Std.Course FIF 0422</td>
<td>$ 4.00</td>
</tr>
<tr>
<td>(Accident Insurance)</td>
<td></td>
</tr>
<tr>
<td>Emergency Medical Care EMS 0119</td>
<td>$ 7.00</td>
</tr>
</tbody>
</table>

The Risk Coverage Fee is non-refundable, if the student withdraws after the official close of the drop/add period for the term.

Student Fees and Tuition
Adult Continuing Education

Students who register for Adult Continuing Education courses, seminars or workshops (includes 1.3200, and 1.4200), shall be charged the fee authorized.

Registration Fees

All Avocational, Recreational and Enrichment Courses $1.00 per contact hour per course.

EXCEPT:

<table>
<thead>
<tr>
<th>Course</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Music I</td>
<td>$ 60.00</td>
</tr>
<tr>
<td>Applied Music I,SP</td>
<td>$ 36.00</td>
</tr>
<tr>
<td>Applied Music II</td>
<td>$ 90.00</td>
</tr>
<tr>
<td>Applied Music II,SP</td>
<td>$ 54.00</td>
</tr>
<tr>
<td>Applied Music III</td>
<td>$120.00</td>
</tr>
<tr>
<td>Fine Arts Enrichment Center Summer Program</td>
<td>$ 30.00</td>
</tr>
<tr>
<td>Fundamentals of Dance</td>
<td>$ 30.00</td>
</tr>
<tr>
<td>Group Music Instruction</td>
<td>$ 24.00</td>
</tr>
<tr>
<td>Introduction to Theatre for Children</td>
<td>$ 30.00</td>
</tr>
<tr>
<td>Microwave Cooking</td>
<td>$ 25.00</td>
</tr>
<tr>
<td>Music Readiness I</td>
<td>$ 23.00</td>
</tr>
<tr>
<td>Music Readiness II</td>
<td>$ 10.00</td>
</tr>
<tr>
<td>Musicianship Class</td>
<td>$ 2.00</td>
</tr>
<tr>
<td>Avocational and Recreational Seminar</td>
<td>$ 4.00</td>
</tr>
</tbody>
</table>

ALL COURSES NOT IDENTIFIED HEREFIELD BY THE EXECUTIVE VICE-PRESIDENT

Duplicate Registration Receipts

HIGH SCHOOL COMPLETION, VOCATIONAL, NON-COLLEGE CREDIT OCCUPATIONAL EDUCATION AND ADULT CONTINUING EDUCATION

Each duplicate of Registration Receipt:
For courses costing less than $5.00 ................................. $ 4.00
For courses costing $5.00 or more ................................. $ 5.00
Test and Examination Fees

General Education Development Test (GED)  
(High School Equivalency)
One test .................................. $  3.00
Total battery ................................ $  14.50
(Fees established by the State Department of Education.)
Validation of GED scores from out of state, United
States Armed Forces Institute (USAFI) or DANTES
(includes diploma, if entitled) ............ $  5.00
High School Credit-by-Examination
(HSCBE) ...................................... $  4.00
Fee waived for students enrolled in a high school
course for credit, if student wishes to take the test for
that particular course.

Test fees are to be paid at time of making application
for the test.

Fees for Ceremonies Conducted
for Special Programs

The President or official designee shall determine
the items to be purchased by the College which will
permit the conducting of ceremonies in accordance
with established traditions for special programs, pri-
marily in the Health Related Education area. The
charge to the student shall not exceed the cost of the
items purchased for each student.

Waiver of Tuition
and Fees

Individuals enrolled in the following courses and/or
programs are eligible for waiver of tuition and fees:

Adult Basic Education (ABE) Courses and Pro-
grams (Non-College Credit)—
No fees are assessed.

Dependent Child of “Special Risk Members”—
Any dependent child of a “Special Risk Member,” as
defined in section 121.021 (15), Florida Statutes,
shall be entitled to a full waiver of tuition and fees if
the special risk member was killed in the line of duty.
Special members are defined as employees whose
retirement application is approved as special risk by
the Division of Retirement. Special risk members are
usually law enforcement officers, policemen, correc-
tional agency employees in contact with inmates and
other employees in the field of law enforcement and
fire protection. This waiver shall apply until the
child’s 25th birthday. Students applying for this
waiver must meet regular admission requirements
and provide proof of age. The College will obtain
documentation from the Division of Retirement certify-
ing eligibility for the special risk member tuition and
fee waiver.

Senior Adults (Non-College Credit)—
A senior citizen, who is 60 years or older and who
provides proof of age, which may be driver’s license or
Jacksonville Transportation Authority pass, may be
enrolled for courses on a space available basis. Proof
is to be submitted to the campus Financial Aid office
prior to registration.

Former Prisoners of War – Vietnam (Non-
College Credit)—
Individuals who were Prisoners of War – Vietnam.
Copy of discharge is to be attached to fee statement.

FJC Diploma Seeking Students in High School
Credit Completion Program—
No fees are assessed.

Employee Reimbursement

FJC full-time regular employees and their depen-
dents may be reimbursed for courses taken at FJC.
The employee or dependent must pay his or her own
fees at registration. However, upon proof of satisfac-
tory completion of course work, employees and their
dependents will be reimbursed 100 per cent of regist-
ration fees, limited to six credit hours per term. For
purposes of this fee waiver, dependents are defined as
a dependent spouse or dependent child who is under
the age of 22, living at home and enrolled as a full-
time student.

Schedule for Payment of Fees

All Non-College Credit Classes
In order for registration to be complete, fees must
be paid at the time of registration.

Seminars and Workshops
As published in announcement, workshops or semi-
nars which require special arrangements may pro-
vide no refund of fees if participant cancels after the
time specified in announcement.

Fee Refunds, Non-College Credit
Courses

Requirements
Refunds for cancelled classes will be processed
automatically on a timely basis by the Finance
Department.

Students who wish to drop a class to receive a
refund or clear their financial aid must report to the
Campus Student Records office and complete a drop
card no later than five business days after the begin-
ning date of class or date shown on the registration
receipt, whichever is later. No refund of fees will be
made on classes for which the fee is $5.00 or less,
unless the college cancels the class.
Amounts and Conditions of Refunds or Credit Memoranda

If a veteran's deferment is authorized and the College cancels the course(s) or the registration of a student is cancelled, the deferment will be reduced by the amount of the cancelled course(s) for a student.

Amounts due the College will be deducted before any check or credit memorandum to the credit card account is issued.

Payment Dates

Refund checks or credit memorandum to credit card accounts will be made in accordance with the schedule established by the College.

Cancellation of Classes

If the College cancels a class at any time prior to its completion, the student's enrollment in that class will be cancelled and the student will be entitled to a 100 percent refund of fees paid for that class.

If the College cancels the class or the student's registration, the College will initiate the refund without written application by the student.

Suspension, Termination or Cancellation of Enrollment

The College reserves the right to suspend, terminate, or retroactively cancel the enrollment of any student for any of the following reasons:

1. Disciplinary reasons
2. Non-payment of course fees when payment is due, including non-payment resulting from dishonored checks.

Agency Sponsored Payments

In instances in which a sponsoring agency or organization has agreed in writing to reimburse FJC for the registration fees and/or books for a particular student and does not render payment to the College in the prescribed manner, the sponsored student(s) will be liable for any charges incurred on his/her behalf and will be billed by the College. The student will be required to render payment within 10 days of the billing date.
Non-College Credit Programs of Study

Program Areas

Occupational Education

Non-college credit programs and courses offer a wide variety of preparatory and supplementary vocational training throughout the junior college district wherever the need exists and adequate facilities are located. Courses are taught in public school facilities during evening hours, in industrial plants, in commercial office buildings, on campuses and centers of Florida Junior College at Jacksonville, and other suitable locations. The length and frequency of meetings for courses differ and are determined by the type and objectives of the course.

The primary purposes of these programs and courses are (1) to provide individuals with necessary skills to make them employable, (2) to provide individuals with training needed to upgrade or broaden their present skills and enhance their occupational opportunities, and (3) to provide the business and industrial community with trained personnel.

In the area of Occupational Education, the College maintains close liaison with, and is assisted by, program advisory committees, professional, civic, and church organizations, governmental agencies, business and industry, and other groups in determining needs and providing occupational education for the community.

A high school diploma or equivalent is not required for enrollment in most Occupational Education courses/programs but is highly recommended.

Persons can be admitted to Preparatory Occupational Education programs only for the purpose of attaining skills leading directly to securing employment.

Persons can be admitted to Supplemental Occupational Education courses provided they are currently or have been previously employed in an occupation related to the course.

Occupational Preparatory Education and Evaluated CEU Courses Grading System

The grading system is designed to evaluate the performance of the student as fairly and equitably as possible.

Letter grades will be assigned for courses as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>INCOMPLETE</td>
</tr>
<tr>
<td>S</td>
<td>SATISFACTORY</td>
</tr>
<tr>
<td>U</td>
<td>UNSATISFACTORY</td>
</tr>
</tbody>
</table>

W      WITHDRAWAL
SI     SATISFACTORY/INCOMPLETE

Once a grade of S or U in a course has been reported to the Registrar, it may only be changed as follows:

1. Upon recommendation of the instructor who assigned the grade, with approval of the program director or dean.

2. Upon recommendation by the director, and approved by the dean, when the instructor who assigned the grade is no longer a member of the faculty of Florida Junior College at Jacksonville.

The I or SI grade may be changed by the instructor within the time limit indicated in the College Calendar.

Occupational Education courses, other than occupational preparatory education and evaluated CEU courses explained before, and all Adult and Continuing Education courses, except high school credit, receive no grade (NG).

Developmental Education Downtown Campus

The Developmental Education Department at the Downtown Campus offers various programs to non-college credit students. The goal of the department is to assist students who need additional help in the academic area to reach their educational goals. Program strategies include:

1. Reading courses that may be taken for high school credit or self-enrichment.

2. Individualized instruction in reading.

3. Tutoring.

4. Diagnostic and prescriptive teaching in the Individualized Manpower Training System (IMTS) in the areas of Math, English, and Reading.

Other services include:

1. Assistance in wise career decision-making and goal-setting through the Downtown Campus career center, Occupational Assessment and Information System (OASIS).

2. In-depth student evaluation through the Evaluation Resource Center (ERC).

Adult and Continuing Education

In the area of Adult and Continuing Education, Florida Junior College at Jacksonville cooperates with the public schools, community schools, health
and welfare groups, civic and community clubs, business and industry, and other adult agencies to provide educational services.

Adults in the community have the opportunity to grow in basic knowledge, improve in home and community life, develop leadership and civic responsibilities, expand in knowledge in general education, and develop creativity in the fine arts.

Adult and Continuing Education Programs are offered where there is community need and interest. Florida Junior College at Jacksonville is offering Adult Education Programs and courses in more than 225 different locations throughout Duval County.

Many programs, courses, and services are offered on a continuing basis. Short courses, in-service training programs, and courses of specific interest may be initiated by request from individuals and groups in the community, based upon resources available at time of request.

**Adult Basic Education**

The Adult Basic Education Program of Florida Junior College at Jacksonville is designed to provide basic literacy instruction in the fundamental academic areas of reading, writing and arithmetic.

The primary focus of study may be on any one or more of the following general knowledge areas:

1. Pre-vocational or employability skills development.
2. Improvements in home and family life.
3. Use of financial resources and consumer education.
4. Social and civic responsibilities.
5. Use of community resources.
7. Human and interpersonal relations.
8. Communication skills in the English language.

Performance in these general knowledge areas will be based upon achievement in the following skill areas: reading, writing, speaking, listening, problem-solving, computation and inter-personal relations.

The Adult Basic Education Program provides supportive services for its students in the areas of guidance and counseling, testing, specialized reading needs, employability skills, auditory/visual screening, and speech therapy.

The Adult Basic Education Program will award the following certificates to deserving ABE students.

**Certificate of Attendance**

The Certificate of Attendance will be issued by the Director of Adult Basic Education to those students with excellent classroom attendance. This certificate will be based on the recommendation of the instructor.

**Certificate of Achievement**

A Certificate of Achievement will be issued to students successfully completing Level I, II or III of the Test of Adult Basic Education.

**Certificate of Completion**

An Adult Basic Education Certificate of Completion will be awarded to students who have successfully passed Level IV of the Test of Adult Basic Education.

Enrollment in Adult Basic Education classes is available to all adults who are 16 years of age or older and function below the eighth grade level on literacy skills.

Adult Basic Education classes are offered in Adult Centers which are located in schools, churches, and other available community facilities throughout Duval County at no cost to the students.

**Adult High School Completion Admission Requirements**

Adults, 18 years of age or older, may choose to earn an adult high school diploma at the College by taking appropriate course work. Persons aged 16 and 17 also may enroll in the Adult High School Completion Program but must wait until a period of six calendar months has elapsed since the date of official withdrawal from public or private high school. Exceptions may be made when recommended in writing by the superintendent of schools or the superintendent's designee from the county in which the student resides while attending FJC or by the principal of a private high school in the local area.

Applicants to this program are required to present the following documentation:

1. Application for admission.
2. Copy of Social Security card.
3. Proof of high school withdrawal (for persons 16 or 17 years of age).
4. Proof of previous education. The following are acceptable for proof of previous education:
   a. Official high school transcript.
   b. Certification by student of completion below ninth grade level.
   c. Verification from previous high school or school board that transcript cannot be obtained.
   d. Waiver of (a) or (c) above by Student Appeals Committee.

Students, 16 years of age or older, who are currently enrolled in a local public or private high school may upon permission from the high school principal or the principal's designee pursue course work at Florida
Junior College at Jacksonville for transfer back to the high school from which the student expects to receive a diploma. Upon completion of the course work, it is the student's responsibility to request that a transcript be sent to the graduating high school.

Applicants to this program are required to present the following documentation:

1. Application for admission.
2. Copy of Social Security Card.
3. Permission note from high school principal or the principal's designee indicating exact subjects to be taken.

**Adult High School Grading System**

The grading system is designed to evaluate the performance of the student as fairly and equitably as possible.

Letter grades will be assigned for courses as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>EXCELLENT</td>
</tr>
<tr>
<td>B</td>
<td>GOOD</td>
</tr>
<tr>
<td>C</td>
<td>AVERAGE</td>
</tr>
<tr>
<td>D</td>
<td>POOR</td>
</tr>
<tr>
<td>I</td>
<td>INCOMPLETE</td>
</tr>
<tr>
<td>NP</td>
<td>NONPUNITIVE</td>
</tr>
<tr>
<td>S</td>
<td>SATISFACTORY – (Course not completed: No Credit)</td>
</tr>
<tr>
<td>U</td>
<td>UNSATISFACTORY</td>
</tr>
<tr>
<td>W</td>
<td>WITHDRAWAL</td>
</tr>
<tr>
<td>Z</td>
<td>A vs C EXPOSURE (30 hours minimum)</td>
</tr>
</tbody>
</table>

Students registered in high school classes but not earning high school credit will receive a grade of NG (no grade).

Once a grade of A, B, C, D, NP, S, U, or Z in a course has been reported to the Registrar, it may only be changed as follows:

1. Upon recommendation of the instructor who assigned the grade, with approval of the division chairperson or director.
2. Upon recommendation by the director, and approval by the dean, when the instructor who assigned the grade is no longer a member of the faculty.

An "I" grade may be assigned only when extenuating circumstances prevent a student from completing the course work during the regular term. To be eligible to receive an "I" grade the student must have completed at least ¾ of the course work.

The "I" grade may be changed by the instructor to A, B, C, D, NP, U, or Z within the time limit indicated in the College Calendar.

**Adult High School Completion Requirements**

There is no set required amount of time necessary to earn an Adult High School Diploma. The Florida State Department of Education has established that an adult can progress at the adult's own rate of speed and achieve credit by subject examination whenever the student judges that he or she is prepared. Thus, an adult may complete credit requirements as rapidly as the adult is able to prove his or her knowledge and skills.

A minimum of 22 unduplicated credits, grades nine through 12, excluding credit in physical education, shall be required for an Adult High School Diploma. Two of these credits must be earned at Florida Junior College at Jacksonville under Admission Status "A." Eleven of these 22 credits must be earned in the following areas:

1. English (2 credits)
   One credit in English grammar and one credit in composition or writing required.
2. Mathematics (3 credits)
3. Natural Science (3 credits)
4. Civics (1 credit)
5. American History (1 credit)
6. Reading Techniques (1 credit)

The additional eleven credits may be earned in other areas as approved by the counselor subject to the following:

1. A course in Americanism vs. Communism is required for graduation. This requirement may be met by taking a one-half credit course or a non-college credit course of 30 clock hours.
2. A maximum of two work experience credits may be earned at 1,000 hours per credit. Each credit awarded must be based on a compilation of hours from a single place of employment.

Effective Fall Term 1984 students must have a cumulative grade point average of 1.5 on a 4.0 scale to qualify for graduation.

All students must either pass State Student Assessment Test, Part I (SSAT I) at their previous high school, or be certified in Basic Skills through testing to meet requirements for SSAT I.

All students must pass the State Student Assessment Test, Part II (SSAT Part II) prior to graduation.

Students are graduated under the catalog requirements which are in effect as of the date of graduation. The graduation date shall be the day on which the final requirement for the program is completed.

It is the high school student's responsibility to make application for graduation after the student has completed requirements. Before a student may graduate, the student must have fulfilled all financial obligations to the College.

**Military Service Credits**

A person who has been admitted to the Adult High School Completion Program may request an evalua-
fication of military educational experience and service by submitting documentary evidence to the Campus Registration Office.

High School Equivalency Diploma

The GED (High School Equivalency) Examination is a battery of five tests administered monthly by Florida Junior College to any person who is at least 18 years of age, out of school, and has a Florida address. Information on test registration may be obtained from any campus Student Records and Admissions office. The registration fee is established by the Department of Education. Persons who pass the exam receive a diploma from the State Department of Education.

HIGH SCHOOL REVIEW classes for GED test preparation are available through each campus Office of Adult and Continuing Education. The classes provide intensive review in areas covered on the GED Exam.

In addition, the GED TESTING SKILLS SEMINAR provides critical testing information for persons who wish to take the GED exam without enrolling in High School Review classes. The fee for the Seminar is $4.00.

High School Testing Program

BASIC SKILLS CERTIFICATION TESTING students who have not passed the State Student Assessment Test, Part I (SSAT I) must meet certification requirements on a prescribed test of basic skills in its place. Information may be obtained in the Student Records and Admissions office on any campus.

STATE STUDENT ASSESSMENT TEST, PART II (SSAT Part II) is required for high school graduation. Information and applications are available in the high school counseling offices and the Student Records and Admissions offices on Downtown, Kent, North, and South Campuses. No fee.

HIGH SCHOOL CREDIT-BY-EXAMINATION (HSCBE), is available in a variety of high school academic subjects. Students may register for HSCBE in the Student Records and Admissions office on Downtown, Kent, North, or South campus. The registration fee is $4.00 unless the student is registered in a high school course having the same number, in which case the fee is waived.

Senior Adult Center

The Senior Adult Center is a resource center for the educational needs of senior adults. It provides a variety of educational experiences for older adults. Approximately 170 non-college credit courses are offered in locations throughout the community, with particular emphasis on interests and concerns of senior adults. Seminars and workshops addressing specific needs are offered periodically to provide further training. For information or counseling, call the Senior Adult Center office at the Downtown Campus, Room 3106, 101 West State Street, 633-8390.

Independent Living for Adult Blind (ILAB)

ILAB is an instructional non-credit program for blind adults. The Home Management/Personal Safety course is modularized, allowing students to elect various components according to need. In Home Management, the student is taught skills necessary to maintain a home effectively. In the Communication component, the student may learn braille, typing, use of handwriting aids and appropriate electronic equipment. Personal safety is emphasized in Orientation and Mobility training which allows a blind person to move about safely and master skills necessary for independent travel. Counseling is also available for students (who range in age from 19 to 92) and their families.

Women's Center

The Women's Center is located at the Downtown Campus, 101 West State Street, Room 3106. Personal, educational, and career counseling services are available to Florida Junior College at Jacksonville students and members of the community at no charge. Class offerings include Assertive Training, Opening Doors for the Widowed, Career Development, Back to School/Back to Work, Opening Doors for Women, Supervisory Training, and others. The Center also offers special programming — short courses, workshops and seminars — to community organizations. Special programs have been designed for community business and professional women (once monthly, Women's Information Exchange luncheons), for women in industrial training programs, single mothers, and women starting their own business. Call 633-8311 for additional information.

CHALLENGE: THE DISPLACED HOMEMAKER PROGRAM, is a uniquely designed three-week training program for displaced homemakers. A displaced homemaker is defined as an individual who:

1. is 35 years of age or older;
2. has worked in the home, providing unpaid employment;
3. is not gainfully employed;
4. has had or would have difficulty securing employment;

5. has been dependent on the income of another family member but is no longer supported by such income, or has been dependent on federal assistance.

Challenge provides an intensive training and counseling program with emphasis placed on self-assessment, confidence building, goal setting, educational re-entry, decision making and job seeking. Supportive services in the form of child care and transportation allowances are provided.

Challenge is located on the Downtown Campus, Room 3106, 101 West State Street, 633-8316.

**Nursing Continuing Education**

A Nursing Continuing Education Program is planned to meet the educational needs of nurses in updating knowledge and skills required for current practice. Continuing education courses are designed to enhance the quality of nursing care provided to the public.

Nursing practice is based on a continuously expanding body of knowledge and skills which prepares nurses to function effectively as members of the health care team.

Reassessment of learning needs and ongoing evaluation of current offerings is the basis for future program development. Topics and locations will vary to meet the needs of the nursing community.

**Community Services**

Through its program of Community Services, the College offers programs of study, institutes, short courses, seminars, workshops, clinics, and lectures to meet the educational needs of adult groups in the community.

Requests for such courses are encouraged. Consideration for such courses is based upon the level of instruction, the number of persons interested, and the availability of resources and qualified instructional personnel at the time of request.

Adults desiring to enter adult classes or programs should apply in person at the adult center or campus offering the subjects of their choice.

**Lawrence R. Geis Southeastern Marine Technical Center**

The College has constructed a new Marine Training Center at Sand Fly Point on the St. Johns River waterfront. The new facility has the latest equipment and is designed to train persons for immediate employment in marine related jobs and for upgrading or updating persons already employed in the marine industry. Training specialties being offered include boatbuilding, marine electricity, marine electronics, marine engines, marine metal fabrication, marine pipefitting and marine welding.

For additional information contact the Director, Lawrence R. Geis Southeastern Marine Technical Center or Dean, Occupational Education, Downtown Campus at 633-8284.
The table below lists the occupational education programs available at various campuses. The codes denote the availability of the programs:

- **KC**: Kent Campus
- **NC**: North Campus
- **SC**: South Campus
- **DC**: Downtown Campus

### OCCUPATIONAL EDUCATION PROGRAMS

**Business Education**
- Basic Typewriting
- Keypunch
- Office Occupations (includes: Typing, Shorthand, Business English and Office Machines)

**Distributive Education**
- Bank Teller Training
- Cashier/Sales/Checker
- Real Estate Principles and Practices

**Health Related Education**
- Medical Assisting
- Nurse Assistant
- Practical Nursing
- Surgical Technician

**Home Economics Education**
- Household Management Specialist
- Supervised Food Service Worker

**Industrial Education**
- Air Conditioning and Appliance Repairs
- Auto Body Repair
- Automotive Machine Shop
- Auto Mechanics
- Brick and Blocklaying
- Carpentry
- Construction Electricity
- Cosmetology
- Gasoline Engine Mechanics
- Industrial Electronics
- Machine Shop
- Marine Outside Machinist
- Marine Technician
- #Boatbuilding Specialty
- #Electricity Specialty
- #Electronics Specialty
- #Engines Specialty
- #Metal Fabrication Specialty
- #Pipefitting Specialty
- #Welding Specialty
- Plumbing and Pipefitting
- Printing
- Sheet Metal
- Truck and Diesel Mechanics
- Welding

**Public Service Education**
- Basic Police Recruit
- Basic Security Officer
- Basic Training for Correctional Officer
- Fire Fighter Minimum Standards
- Water-Sewage Plant Communications

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*Specialty tracks available with non-college credit program.*

*(A notation in the right hand columns of the above chart indicates the campus on which a program is available.)*
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<th>NON-COLLEGE CREDIT STUDIES</th>
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<th>South Campus (SC)</th>
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<td>Supervisory Training</td>
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<td>Nursing Continuing Education</td>
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<td>Clothing Construction</td>
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<td>Custom Dressmaker</td>
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<td>Drapery Construction</td>
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<td>Floral Design</td>
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<td>Furniture Reupholstery</td>
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<td>Household Repair and Maintenance</td>
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<td>Aviation</td>
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<td>High School Equivalency Diploma (GED)</td>
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<td>Independent Living for Adult Blind</td>
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<td><strong>(A notation in the right hand columns of the above chart indicates the campus on which a program is available.)</strong></td>
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</tbody>
</table>
Occupational Education Programs of Study
Awards/Related Course(s)

Business Education

CERTIFICATE OF APPLIED SCIENCE:
Office Occupations
STS 0309 Office Occupations I
STS 0310 Office Occupations II
STS 0311 Office Occupations III

CERTIFICATE OF TRAINING:
Basic Typewriting
TYG 0110 Basic Typewriting

Distributive Education

CERTIFICATE OF TRAINING:
Bank Teller Training
FCR 0415 Bank Teller Training

Cashier/Sales/Checker
GMR 0310 Cashier/Sales/Checker

Real Estate Principles and Practices
RES 0211 Real Estate Principles and Practices

Health Related Education

CERTIFICATE OF APPLIED SCIENCE:
Medical Assisting
MEA 0310 Medical Assisting

Practical Nursing
PRN 0310 Practical Nursing

Surgical Technician
STO 0310 Surgical Technician

CERTIFICATE OF TRAINING:
Nurse Assisting
NUA 0310 Nurse Assistant

Home Economics Education

CERTIFICATE OF TRAINING:
Supervised Food Service Worker
FSM 0314 Supervised Food Service Worker

Industrial Education

CERTIFICATE OF APPLIED SCIENCE:
Air Conditioning and Appliance Repair
ACT 0309 A/C and Appliance Repair I
ACT 0310 A/C and Appliance Repair II
ACT 0311 A/C and Appliance Repair III

Auto Body Repair
ABF 0109 Auto Body Repair I
ABF 0110 Auto Body Repair II
ABF 0111 Auto Body Repair III

Automotive Machine Shop
MSH 0318 Automotive Machine Shop I
MSH 0319 Automotive Machine Shop II
MSH 0320 Automotive Machine Shop III

Auto Mechanics
AUM 0309 Automotive Mechanic I
AUM 0310 Automotive Mechanic II
AUM 0311 Automotive Mechanic III

Brick and Blocklaying
MAY 0309 Brick and Blocklaying I
MAY 0310 Brick and Blocklaying II
MAY 0311 Brick and Blocklaying III

Carpentry
CAP 0309 Carpentry I
CAP 0310 Carpentry II
CAP 0311 Carpentry III

Construction Electricity
IEL 0309 Construction Electricity I
IEL 0310 Construction Electricity II
IEL 0311 Construction Electricity III
Cosmetology
COY 0309 Cosmetology I
COY 0310 Cosmetology II
COY 0311 Cosmetology III

Gasoline Engine Mechanics
ENR 0309 Gasoline Engine Mechanic I
ENR 0310 Gasoline Engine Mechanic II
ENR 0311 Gasoline Engine Mechanic III

Industrial Electronics
ELS 0309 Industrial Electronics I
ELS 0310 Industrial Electronics II
ELS 0311 Industrial Electronics III

Machine Shop Work
MSH 0309 Machine Shop Work I
MSH 0310 Machine Shop Work II
MSH 0311 Machine Shop Work III

Marine Outside Machinist
MSH 0321 Marine Outside Machinist I
MSH 0322 Marine Outside Machinist II
MSH 0323 Marine Outside Machinist III

Plumbing and Pipefitting
PPF 0309 Plumbing and Pipefitting I
PPF 0310 Plumbing and Pipefitting II
PPF 0311 Plumbing and Pipefitting III

Sheet Metal
SHM 0309 Sheet Metal I
SHM 0310 Sheet Metal II
SHM 0311 Sheet Metal III

Truck and Diesel Mechanics
DIM 0313 Truck and Diesel Mechanics I
DIM 0314 Truck and Diesel Mechanics II
DIM 0315 Truck and Diesel Mechanics III

Welding
WEL 0309 Welding I
WEL 0310 Welding II
WEL 0311 Welding III

CERTIFICATE OF TRAINING:
Printing
GRA 0310 Printing

Marine Technician
Core Courses
MTE 0001 Shipyard/Shipboard Orientation
MTE 0002 Marine Industrial Safety
MTE 0003 Introduction to Blueprint Reading
   for Marine Technicians
MTE 0004 Basic Mathematics for Marine
   Technicians

Pipefitting Specialty Track
MTE 0050 Introduction to Metal Work
MTE 0060 Pattern Layout for Marine
   Pipefitters
MTE 0061 Fittings Used in Marine
   Piping Systems
MTE 0062 Basic Valves and Gauges Used
   in Marine Pipefitting
MTE 0063 Basic Bending, Testing and
   Threading Processes in Marine
   Pipefitting
MTE 0064 Basic Welding and Brazing
   for Marine Pipefitting

Metal Fabrication Specialty Track
MTE 0050 Introduction to Metal Work
MTE 0054 Basic Fabrication of
   Marine Heating
   and Air-Conditioning Ducts
MTE 0053 Basic Parallel Line
   Development
   and Fabrication in Metal Work
MTE 0052 Basic Triangulation
   Pattern Development
   for Fabrication of Metal Work
MTE 0051 Bending of Plates and Angles
MTE 0055 Basic Oxyacetylene and Tack
   Welding for the Metal Fabricator

Electronics Specialty Track
MTE 0030 Introduction to Marine
   Electronics
MTE 0031 Marine Electronic Functions
   and Systems
MTE 0032 Troubleshooting and Maintenance
   Procedures in Marine Electronics
MTE 0033 Marine Electronic Digital and
   Computer Fundamentals

Engines Specialty Track
MTE 0043 Operation and Overhaul of
   Marine Diesel Engines
MTE 0042 Tune-Up of Marine Diesel Engines
MTE 0041 Maintaining and Repairing Fuel
   Systems in Marine Diesel Engines
MTE 0040 Troubleshooting Marine Diesel
   Engine Complaints
MTE 0044 Marine Outboard Motor
   Familiarization

Welding Specialty Track
MTE 0080 Shielded Metal-Arc Welding
   and Oxyacetylene
   Equipment for Marine Welding
MTE 0081 Blueprint Reading and Welding
   Symbols for the Marine Welder
MTE 0082 Shielded Metal-Arc Welding,
   Flat Position, for Marine Welding
MTE 0083 Oxyacetylene and Air-Arc
   Cutting and Gouging
   for Marine Welding
MTE 0084 Shielded Metal-Arc
   Welding, Horizontal
   Position, for Marine Welding
MTE 0085 Shielded Metal-Arc
Public Service Education

CERTIFICATE OF TRAINING:

Basic Police Recruit Course
LAE 0310 Basic Recruit Training for Police Officers

Basic Security Officer Course
SEO 0210 Basic Security Officers Training Course

Basic Training for Correctional Officers
COR 0418 Basic Training for Correctional Officers

Fire Fighter Minimum Standards Course
FIF 0422 Fire Fighter Minimum Standards Course

Water/Sewage Plant Communications
APC 0221 Water and Sewage Plant – Related Communications
Non-College Credit
Cross Reference of New Numbers

The Non-College Credit Courses are in the process of conversion to the Statewide Course Numbering System (SCNS), consistent with the college credit course assignments within SCNS.

Beginning the 1984/85 academic year, the following courses have been converted to the SCNS. Others will be added later. The old course number is cross-referenced to the new SCNS number to help in locating the description of the course.

<table>
<thead>
<tr>
<th>Old Prefix and Number</th>
<th>Title</th>
<th>New Prefix and Number</th>
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<tbody>
<tr>
<td>EME 0011</td>
<td>Basic Review Emergency Care</td>
<td>EMS 0381</td>
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<td>EME 0012</td>
<td>Advanced (Rescue) Emergency Care</td>
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<td>MLS 0500</td>
<td>Panorama of Advances in Medical Technology</td>
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</table>
Non-College Credit
Course Descriptions

All courses in the following list are not taught each term. Class schedules are published prior to each term which show the courses that will be offered.

Occupational Education Courses

AAC 0030  Income Tax Accounting for Business
The material taught in this course is based on the Internal Revenue Code. Persons in the tax accounting field who prepare returns for private individuals, merchants, and other businessmen are taught to prepare and keep suitable records for income tax purposes. They are taught to prepare their income tax returns according to legal interpretations.

AAC 0120  Basic Accounting
A course designed as supplementary training to persons employed in a related field to acquaint the student with the complete bookkeeping cycle. Includes journalizing, posting financial statements, adjusting and closing books. Emphasis is given to inventory methods, special journals, control accounts, depreciation, and payroll methods.

AAC 0125  Basic Accounting II
A continuation of basic accounting principles (AAC 0120). Includes special journals and accounting for special business transactions, notes, accruals, partnerships, corporations, and the use of data processing in accounting.

AAC 0130  Basic Bookkeeping I
High School Cr. 1/2
A course designed to provide meaningful business problems at the beginning level, to equip students with basic vocational skills, to provide the student with an understanding of business forms and to help them develop work habits and attitudes. Units included will cover basic skills for record keeping, cashiers, banking, petty cash, and record keeping for retail sales clerks, students, and families.

AAC 0132  Basic Bookkeeping II
High School Cr. 1/2
Prerequisite: AAC 0130. A course designed to provide meaningful business problems at the beginning level, to equip students with basic vocational skills, to provide the students with an understanding of business forms and to help them develop work habits and attitudes. Units included will cover record keeping for a purchasing department, a wholesale sales department, a payroll department, and for a small retail business.

AAC 0140  Basic Accounting I
High School Cr. 1/2
A course designed to acquaint the student with the accounting cycle with emphasis on journalizing and posting, the worksheet, financial statements, adjusting and closing procedures, and the use of special journals and subsidiary ledgers. The completion of a practice set is required.

AAC 0142  Basic Accounting II
High School Cr. 1/2
Prerequisite: AAC 0140. A further study of accounting cycle with emphasis placed on payroll systems, automated data processing, special journals, petty cash, fixed assets and depreciation, notes and interest, and partnerships and corporations. The completion of two practice sets is required.

ABF 0109  Auto Body Repair I
This course is designed specifically for job entry training in the repair and replacement of damaged automobile body parts, including the removal of dents, glass installation, body painting and refinishing, and upholstery.

ABF 0110  Auto Body Repair II
Continuation of ABF 0109.

ABF 0111  Auto Body Repair III
Continuation of ABF 0110.

ACT 0309  Air Conditioning and Appliance Repair I
This course is designed specifically for job entry training and provides instruction in basic electricity, using hand tools and specialized tools and test equipment. It also covers the principles of refrigeration and servicing of refrigeration equipment such as refrigerators, ice makers, and room air conditioners.

ACT 0310  Air Conditioning and Appliance Repair II
This course is a continuation of Air Conditioning and Appliance Repair I, and is designed specifically for job entry training and provides instruction in the servicing, testing and repairing of clothes washers, clothes dryers, dishwashers, electric ranges, and microwave ovens.

ACT 0311  Air Conditioning and Appliance Repair III
This course is a continuation of Air Conditioning and Appliance Repair II and is designed specifically for job entry training and provides instruction in psychrometries, load estimating, duct sizing, and servicing, testing and repairing central air conditioners and heat pumps.

AGG 0310  Nursery Operations
This course is designed for job entry training. The course consists of growth requirements, identification, soil preparation, propagation, fertilization, plant management, pruning and merchandising.

AIC 0003  Air Conditioning, Refrigeration and Heating
To acquaint the student with the installation and service of air conditioning systems. Computation of heat gain and loss, diagnosis and correction of problems, reading of blueprints, diagrams, and schematics are included. Expendable materials supplied by student. This course is designed primarily for off-campus supplementary instruction.

AIC 0315  Air Conditioning, Refrigeration and Heating
This course is designed primarily for apprenticeship instruction and its contents will include the proper procedure to install and service commercial and residential air conditioning systems, to compute heat gain and heat loss of buildings for summer and winter air conditioning, to diagnose and repair problems with commercial refrigeration systems of both medium and low temperature, and to read blueprints, plans, electrical diagrams and schematics necessary to perform the aforementioned tasks.

AIC 0390  EMP Air Conditioning, Refrigeration and Heating
This course is designed to meet the needs of industry employers and underemployed employees in the air conditioning, refrigeration and heating industry.
AIM 0010 Aircraft Powerplants Mechanics
This course is designed as supplementary instruction for persons already employed in the field or in a related field. Instruction will include theory, maintenance procedures, and safety precautions associated with aircraft power plants.

AIM 0012 Airframe Mechanics
This course is designed as supplementary instruction for persons already employed in the field or in a related field. Instruction will include theory, maintenance procedures, and safety precautions associated with aircraft mechanics.

AIM 0014 Airframe and Powerplant Mechanics
This course is designed as supplementary instruction for persons already employed as airframe or powerplant mechanics or related occupations. Instruction will include theory, maintenance procedures, and safety precautions. Topics include mathematics, physics, basic electricity, aircraft hardware, materials and processes, and the use of handtools and measuring devices.

AIO 0020 Advanced Instrument Training – Private Pilot
A course designed for professional general aviation pilots to gain instrument rating or to maintain instrument flight currency under FAR Part 61. Course is limited to licensed private pilots. Training will be a combination of classroom lecture and time on FAA approved ATC 610K flight simulators.

AIO 0022 Advanced Instrument Training – Commercial Pilots
A course designed for commercial aviation pilots to maintain proficiency in Instrument Flight Operations and to meet the FAR requirements for currency in IFR experience under Part 61.

AIO 0024 Advanced Instrument Training – Currency of Certificate
A course designed for professional aviation pilots holding private or commercial licenses with instrument ratings to qualify for instrument flight currency using FAA approved ATC 610K flight simulators.

APC 0011 Business English
A study of the business letter, discrimination in the use of words, spelling, review of grammar, punctuation and development of language power. This course is designed for persons already employed in a related field for supplementary instruction.

APC 0012 Business English High School Cr. 1
A study of the business letter, discrimination in the use of words, spelling, review of grammar, punctuation and development of language power.

APC 0014 Business English I High School Cr. 1/2
An extensive review of grammar, punctuation, spelling, and vocabulary. Also covers listening and reading skills and shows the student how to use various reference books.

APC 0016 Business English II High School Cr. 1/2
Prerequisite: APC 0014. Comprehensive training in the writing of various types of business communications—letters, memos, and reports. Emphasis is placed on writing with an understanding of human behavior as well as a firm grasp of mechanical principles.

APC 0221 Water and Sewage Plant – Related Communications
Training in communications in preparation for the Water and Sewage Plant Operator’s License Examination.

APS 0222 Water and Sewage Plant – Related Chemistry
This course covers an introduction to the principles of modern inorganic chemistry topics in structure of matter, gas laws, theory acids and solution and suspension, carbon and compounds for persons already employed in the field.

AUM 0003 Automotive Mechanics
This course consists of supplementary instruction in the repair of passenger automobiles and light delivery trucks, and includes engines, transmissions, clutches, carburetors, ignition systems, chassis, bodies, and power operated equipment.

AUM 0309 Automotive Mechanic I
This course is designed specifically for job entry training in the repair of passenger automobiles and light delivery trucks, including engines, transmissions, clutches, carburetors, ignition systems, chassis, bodies, and power operated equipment.

AUM 0310 Automotive Mechanic II
Continuation of AUM 0309.

AUM 0311 Automotive Mechanic III
Continuation of AUM 0310.

AUM 0390 EMP Automotive Mechanics
The course is designed to meet the needs of employers and underemployed employees in the automotive mechanics industry.

AUM 0395 EMP Automotive Machine Shop
The course is designed to meet the needs of employers and underemployed employees in the automotive machine shop industry.

BCN 0010 Building Maintenance
This course is designed to upgrade the skill level of persons in major phases of repair and maintenance of buildings and fixtures; including painting, carpentry, brick and blocklaying, electricity, air conditioning and refrigeration, sheet metal, and plumbing. Instruction will include safety and the use of hand and power tools.

BCN 0315 Laborer’s Apprenticeship Training
Training in skills required by a laborer in the construction industry, including: safety and first aid, hand tools, handling construction materials, soil preparation, pipe laying, gasoline and electric powered equipment, concrete preparation and handling; concrete chipping and cutting, sandblasting, oxyacetylene cutting, carpentry labor and other skills prescribed by apprenticeship standards. Enrollment limited to apprentices in Construction Laborer’s Apprenticeship Training Program.

BDP 0070 Fundamental Computer Concepts
The purpose of this course is to provide an overview of computers to today’s world: what they are, what they do, how they work, the hardware involved, the necessary components of an ”information system,” the need for accuracy and controls, the most common languages, the most common business applications, and the understanding of the basic terminology.

BDP 0072 Introduction to Computers
This course is intended for operators of small business and others with no previous experience in data processing. It introduces the student to the world of data processing and
includes a study of the various types of computers and microcomputers, hardware and software and how they relate, elementary problem solving, survey of programming languages including BASIC, history of computers, and how to select and use computers in the home and in the small businesses.

BDP 0075 Mini-Micro Computing Systems
This course is designed as supplementary instruction for persons employed in a related area. It is a survey of microcomputer applications, architectures, and availability, including the process of evaluating, ordering, and assembling kits and basic machine language processing. This course is for those interested in building their own computer systems. Desirable background includes strong foundations in high school mathematics, fundamentals of electricity and electronics, and/or basic concepts in data processing.

BDP 0085 Basic Language for the Microcomputer
This course is designed to provide the student with the knowledge and "hands-on" experience to program microcomputers with the BASIC language. Although the coverage will not allow the student to enter the job market as a programmer, it will provide a student with a basic foundation in the operation of microcomputers and establish the essential fundamentals of programming in the microcomputer. With this knowledge, the student will be able to program simple applications and will be able to continue to expand skills through other programming courses or personal study.

BDP 0090 Intermediate Basic for Microcomputers
Prerequisite: BDP 0085 or equivalent programming experience. This course is intended for students who have completed the Basic Language for Microcomputers course or its equivalent, and is designed to enhance their understanding and programming skills utilizing the microcomputer. The course covers topics such as Multilevel Tables, String Manipulations, Controlling the Monitor, and Disk Input and Output operations. In addition, this course allows the student to gain "hands-on" experience and skill utilizing the campus microcomputer laboratory to reinforce the concepts presented in the classroom lectures.

BLR 0390 EMP Blueprint Reading
The course is designed to meet the needs of the employers and under-employed employees in the blueprint reading field.

CAP 0309 Carpentry I
This course is designed specifically for job entry training in general carpentry work involved in erection of wooden building frames, installation of exterior and interior trim, floorlaying, form building, scaffold construction, stairbuilding, and other similar types of woodwork.

CAP 0310 Carpentry II
Continuation of CAP 0309.

CAP 0311 Carpentry III
Continuation of CAP 0310.

CAP 0315 Carpentry
This course is designed primarily for apprenticeship instruction and its contents will include training in general carpentry work involved in erection of wooden building frames, installation of exterior and interior trim, floorlaying, form building, scaffold construction, stair building, and other similar types of woodwork.

CAP 0395 EMP Carpentry
The course is designed to meet the needs of employers and under-employed employees in the carpentry industry.

CEQ 0115 Operating Engineering
This course is designed primarily for apprenticeship instruction. Its contents will include proper procedures in the maintenance and operation of selected power construction equipment ranging from air compressors to steam shovels.

CGC 0011 Child Growth and Development
High School Cr. 1
A study of the child from prenatal through pre-school age with emphasis on physical, social, emotional and mental development. Cultural and environmental influences on the child will also be incorporated into this course.

CGC 0015 Day Care Administration and Supervision
This course is for the individual who is working in a child care center or wishes to expand work in or is working in day care administration and supervision. Areas to be covered include setting up a program, personnel management, fiscal management, systematic planning for day-to-day operations, public relations, evaluation, and human relations.

CGC 0020 Making Child Care Teaching Materials
This course is designed to teach students how to make child care teaching materials at little or no cost. It is especially appropriate for the individual who is already employed in the child care field.

CGC 0025 Child Day Care Worker In-Service Training
This course is designed to assist child day care workers in improving, on site, the quality of their care of young children. The areas of training to be covered, according to need, are child growth and development; child care programming and activities; health and safety practices; nutrition and good eating habits; design and use of physical space; working with parents; community health and social service resources; day care for multi-lingual children; day care for handicapped children; day care home administration; and handling behavior problems.

CHD 0020 Growing With Your Young Child
This class deals with the crucial and exciting first two years of a child's life. Parents will learn ways to enrich the physical, intellectual, and emotional growth of children six to 24 months of age. Common problems and needs of infants will also be discussed.

CHD 0100 Child Development Associate Preparation Course
This course is designed as supplementary instruction and is a competency based, individualized, and predominately on-the-job training course designed to provide the student with the means of acquiring competencies needed to become a Child Development Associate.

CLT 0114 Specialized Clothing
This course includes a combination of theory and laboratory and community experiences and is designed for students who have mastered basic construction skills. Major concepts include advanced construction techniques, special fitting problems, use of special fabrics and trims, design details, designer patterns, linings and underlinings, and special finishing techniques. The instructional activities include the construction of selected items such as bridal and evening wear, men's wear, children's wear, swimwear, lingerie, sportswear and fashion accessories. Concepts in management, safety, free enterprise, and consumer and economic education are taught as they relate to instruction.
CLT 0310 Basic Clothing Construction
This course is designed specifically for job entry training and is planned for the person who has had little or no experience in recently developed techniques in clothing construction and includes a study of pattern selection including body measurements and simple alterations; fabric selection and preparation with emphasis placed on "easy-to-sew" patterns and fabrics; selection, use, and care of modern sewing and pressing equipment; completion of a simple garment; and selection of suitable accessories.

CLT 0311 Basic Clothing Construction High School Cr. 1
This course is planned for the person who has had little or no experience in recently developed techniques in clothing construction and includes a study of pattern selection including body measurements and simple alterations; fabric selection and preparation with emphasis placed on "easy-to-sew" patterns and fabrics, selection, use, and care of modern sewing and pressing equipment; completion of a simple garment, and selection of suitable accessories.

CLT 0312 Basic Clothing Construction
This course is designed as supplementary instruction for homemakers. The student will learn the proper procedure involved in developing techniques in clothing construction and the course includes a study of pattern selection including body measurements and simple alterations; fabric selection and preparation with emphasis placed on "easy-to-sew" patterns and fabrics, selection, use, and care of modern sewing and pressing equipment; completion of a garment, and selection of suitable accessories.

CLT 0313 Advanced Clothing Construction High School Cr. 1
This course is designed as supplementary instruction for homemakers who have completed Basic Clothing Construction. It includes developing the ability to make more difficult pattern alterations, use of more complicated patterns, use and care of fabrics requiring special treatments and completion of at least one garment using more advanced techniques and details which give individuality to the garment that will be required.

CLT 0314 Advanced Clothing Construction High School Cr. 1
This course is designed for the person who has completed Basic Clothing Construction. It includes developing the ability to make more difficult pattern alterations, use of more complicated patterns, use and care of fabrics requiring special treatments and completion of at least one garment using more advanced techniques and details which give individuality to the garment that will be required.

CLT 0330 Basic Clothing Construction for Seniors
This course is designed as introductory instruction for senior adults. It will include learning basic procedures involved in clothing construction, a study of pattern selection including body measurements and simple alterations, fabric selection, and completion of a simple garment.

CMP 0506 Intermediate Clothing Construction High School Cr. 1
This course is designed for the person who has completed Basic Clothing Construction, and includes a study of more difficult construction techniques and of fabrics more difficult to handle than were used in Basic Clothing Construction.

CMP 0510 Intermediate Clothing Construction
This course is designed as supplementary instruction for homemakers who have completed Basic Clothing Construction, and includes a study of more difficult construction techniques and of fabrics more difficult to handle than were used in Basic Clothing Construction.

CMP 0512 Basic Tailoring
This course is designed as supplementary instruction for the person who has demonstrated proficiency in the skills of clothing construction and includes selection, use and care of fabrics suitable for tailoring techniques. The construction of a lined garment, such as a jacket, will be required.

CMP 0514 Men's Clothing Construction
This course is designed for the person who has demonstrated proficiency in the skills of clothing construction and would like supplementary instruction in skills in making men's clothing. Included will be how to select and use a commercial pattern with appropriate alterations, if needed. The techniques for making polyester pants, men's shirts and ties will be demonstrated and the construction of these men's garments will be required. Industrial sewing will be utilized.

CMP 0515 Alterations
This course prepares the worker to alter and repair ready-to-wear garments for customers of retail shops or in their own homes as a private business. It involves an understanding of fabric handling, clothing construction, pressing, and training in fitting techniques. The approach of the course is based on the assumption that a successful alterationist must have a thorough understanding of garment construction in order to complete the necessary fitting changes.

CMP 0516 Custom Dressmaking
Course work includes supplementary techniques and skills in constructing custom made clothing. Students should acquire skills which will enable the student to become self-employed as a custom dressmaker.

CMP 0517 Short Cuts in Sewing
This course is designed for those who are proficient in the better clothing construction techniques but would like to make quick, casual clothes and children's clothes. This course will include supplementary instruction in short cuts in marking, construction, and finishing. Factory methods and the use of industrial machines will be emphasized.

CMP 0518 Sewing Short Cuts for Seniors
This course is designed for senior adults who know the basics of clothing construction, but who would like to learn techniques for making quick, casual clothes. This course will include supplementary instruction in short cuts in marking, construction, and finishing. Emphasis will be placed on efficiency and economy.

CMP 0520 Fashion Design and Flat Pattern Drafting
This course is designed for students with prior experience in clothing construction who are interested in designing garments for themselves and others. Major concepts of the course include the influence of individuals on fashion, fashion history, elements and principles of design and their application to fashion, and designing and constructing a garment. Persons with complicated fitting problems and those who wish to create individual fashions will benefit from the course.

CMP 0525 Wardrobe Accessories for Seniors
This course, which requires basic skills, is designed for the senior adult who is interested in enhancing and extending his/her wardrobe by learning how to make hats, belts, scarves, ties, lapel ornaments, or any other accessory. Development of personal creativity is emphasized.

CMP 0530 Intermediate Clothing Construction for Seniors
This course is designed for senior adults who have completed Basic Clothing Construction for Seniors, or who already have basic sewing skills. It includes the use of more difficult patterns, learning to make pattern alterations, and
completion of one garment using more advanced techniques of sewing.

COR 0418 Basic Training for Correctional Officers
The basic training for correctional officers is designed specifically for job entry training to give each student a basic understanding of the duties and responsibilities of the line correctional officer. In addition, it is designed to give the student an overview of the other related fields within the criminal justice system. Specific areas in which the student will receive instruction include operational procedures, legal aspects of corrections, supervisory practices and related technical skills. NOTE: Course is restricted to individuals sponsored with intent of employment by area law enforcement agencies.

COR 0425 Specialized Corrections Training
This course is designed to provide supplementary specialized instruction of area corrections personnel. Specific areas of instruction include numerous highly specialized subjects such as cause, effect and treatment of alcoholism; institutional crisis intervention; hostage negotiation; inmate classification; civil and legal rights of the confined; and correctional treatment techniques.

COR 0426 In-Service Corrections Training
This course is designed to provide supplementary in-service instruction of area corrections personnel. Specific areas of instruction include numerous subjects such as institutional and non-secure procedures; mechanics of search; fingerprinting; contraband control; discipline; interpersonal communications; counseling and guidance; offender treatment; medical, social and volunteer services; records and report writing; first aid; and firearms.

COY 0309 Cosmetology I
This is an introductory course and is designed to provide students with the essential concepts in the field of Cosmetology. In addition to classroom instruction, this course will introduce, through laboratory experience, all of the major concepts and practices of Cosmetology.

COY 0310 Cosmetology II
Prerequisite: COY 0309 or consent of professor. This course includes a combination of theory and working in the laboratory. Major concepts and practices introduced in COY 0309 will be continued. Intermediate skills will be developed on clients in the school-operated salon.

COY 0311 Cosmetology III
Prerequisite: COY 0309 and COY 0310 or consent of the professor. Theory and practices included in the State Board preparation are emphasized. In addition, a practical application of skills and techniques with emphasis on speed will be stressed in an effort to get the student's performance up to an employment competency level.

DEA 0912 Dental Assisting Seminar
This seminar is designed as supplementary instruction to upgrade skills of dental assistants and dental hygienists.

DIM 0050 Changing Technology in Diesel Vehicles
This course is designed to teach innovations and their repair procedures to prospective and current mechanics of diesel vehicles. Specific emphasis will be placed on GM products and safety.

DIM 0109 Diesel Engine Mechanics
This course is designed as supplementary instruction for persons already employed in the field or in a related field. Instruction will include theory, maintenance procedures, and safety precautions associated with diesel powered engines.

DIM 0313 Truck and Diesel Mechanics I
This course is designed specifically for job entry training in theory, diagnosis, maintenance, and repair of light and medium duty trucks and fork lift equipment.

DIM 0314 Truck and Diesel Mechanics II
Continuation of DIM 0313.

DIM 0315 Truck and Diesel Mechanics III
Continuation of DIM 0314.

DIM 0390 EMP Diesel Mechanics
This course is designed to meet the needs of employers and underemployed employees in the diesel mechanics industry.

DIM 0395 EMP Truck Mechanics
This course is designed to meet the needs of employers and underemployed employees in the truck mechanics industry.

DTG 0312 Drafting
This course is designed as supplementary instruction for persons already employed in the field or in a related field. The student will learn proper procedure in the preparation of clear, complete and accurate working plans and detail drawings from rough or detailed sketches or notes for engineering or manufacturing purposes according to specified dimensions.

ELS 0112 Basic Electronics
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. The student will learn the proper procedure in the installation, maintenance, and repair of electronically controlled and operated distribution systems used in industry and commercial businesses.

ELS 0115 Selected Concepts from Electronics Theory: Circuits
This course is designed for students who have completed military electronics training schools and who wish to receive college credit as outlined in the Guide to Evaluation of Educational Experiences in the Armed Forces. The course includes selected topics from college credit courses ETE 1010C, 1020C, 2101C, 2111C and 2601C, in the areas of DC electricity, AC electricity, solid-state diode circuits, transistor amplifiers, and introductory digital electronics. This course is intended solely for the purpose of ensuring that military students are current in their knowledge of the rapidly changing field of electronics. At the completion of the course the student will be given a comprehensive test. Students who successfully complete the test and who present a Department of Defense Form 255 (Application for the Evaluation of Educational Experiences During Military Service) to the Campus Registration Office will receive the appropriate credits.

ELS 0119 Radio Operators Training Course
This course is designed as supplementary instruction in radio operating procedures and FCC regulations as they apply to amateur radio operators. Training in the International Morse Code, and Basic Electronic Theory is included. The student will have the opportunity to take the Novice Class Radio Operators license test upon completion of this course. Tests are supplied by the Federal Communications Commission (FCC) and only those passing this exam will receive their operators license.

ELS 0120 Examination Preparation: Radiotelephone Operators License
A 64-hour review of material for the Federal Communications Commission Commercial Radiotelephone Operators Licenses including communications laws, operating procedures, basic and advanced electronic theory and examination procedures.
ELS 0309  Industrial Electronics I
This course is designed to prepare a person for full-time employment in the industrial electronics field. Included in the course are theory, trouble shooting, testing, and safety precautions.

ELS 0310  Industrial Electronics II
Continuation of ELS 0309.

ELS 0311  Industrial Electronics III
Continuation of ELS 0310.

ELS 0390  EMP Marine/Industrial Electricity
This course is designed to meet the needs of employers and underemployed employees in the marine/industrial electricity field.

ELS 0410  Examination Preparation:
Certified Electronics Technician
This course is designed to prepare students for the National Organization of Certified Electronic Technicians' Examination covering television signals, transmission lines, electronic components, solid state electronics, A/C theory, and television/radio construction. The Certified Electronics Technician exam will be administered at the final class meeting and is industry-approved.

EME 0014  Emergency Medical Technology Seminar
This seminar is designed as supplementary instruction to upgrade the skills of the working emergency medical technician.

EME 0024  12 Lead Electrocardiogram
This course is designed for supplementary training and includes an application of technical principles in actual operation of laboratory, following didactic presentation of principles. It also includes a study of electrodes, electrode application, montages, recording techniques, observation of laboratory operation and practice of electrode application under supervision.

EMS 0065  Basic Life Support
This course is designed as supplementary instruction to provide a periodic update on cardio-pulmonary resuscitation.

EMS 0119  Fundamentals of Emergency Medical Care
Corequisite: EMS 0120. This course is designed for persons already employed in a public service field and includes current techniques practiced by a First Level EMT providing emergency medical care. On successful completion of this course and the corequisite, EMS 0120, one is qualified to take the State Registry Examination for Emergency Medical Technician. EMS 0119 and EMS 0120 must be taken at the same time.

EMS 0120  Fundamentals of Emergency Medical Care (Clinical Experience)
Corequisite: EMS 0119. Emergency procedures for life-threatening problems will be demonstrated and practiced in the college laboratory. Clinical rotation will be required in local hospital emergency care facility. This course is corequisite to EMS 0119 and can be taken only in combination within that course.

EMS 0340  Victim Rescue
This course is designed as supplementary instruction and includes a review of victim rescue operations and the use of extrication tools. It is approved for continuing education units with the Emergency Medical Services.

EMS 0381  Basic Review Emergency Care
This is a 32-hour refresher course for those already employed in the field who need a review for three-year recertification by the Division of Health.

EMS 0391  Advanced (Rescue) Emergency Care
This course is designed as supplementary instruction and includes a review of life saving procedures, intravenous fluid therapy and use of various equipment, such as defibrillators and synchronizers.

EMS 0731  Basic Life Support Instructor
This course is designed as supplementary instruction to enable those with the Basic Life Support programs in health careers to become instructors.

ENR 0003  Gasoline Engine Mechanic
This course includes training in the inspection and repair of the mechanical equipment of gasoline powered engines (other than automobile and truck), including motor testing, carburetor adjusting, fuel line cleaning, generator adjusting, valve replacing and grinding, piston ring installing, and replacing broken or damaged parts. This course is designed primarily for off-campus supplementary instruction.

ENR 0010  Gas Turbine Engine Mechanics
This course is designed as supplementary instruction for persons already employed in the field or in a related field. Instruction will include theory, maintenance procedures, and safety precautions associated with gas turbine engines.

ENR 0050  Changing Technology in Gasoline Vehicles
This course is designed to teach innovations and their repair procedures to prospective and current mechanics of gasoline vehicles. Specific emphasis will be placed on GM products and safety.

ENR 0309  Gasoline Engine Mechanic I
This course is designed specifically for job entry training in the inspection and repair of the mechanical equipment of gasoline-powered engines (other than automobile and truck), including motor testing, carburetor adjusting, fuel line cleaning, generator adjusting, valve replacing and grinding, piston ring installing, and replacing broken or damaged parts.

ENR 0310  Gasoline Engine Mechanic II
Continuation of ENR 0309.

ENR 0311  Gasoline Engine Mechanic III
Continuation of ENR 0310.

ERE 0010  Professional Engineers Refresher Course
A review of theory and current design practice in the major engineering disciplines. This course provides guidance and orientation in preparation for State Board Examinations for Professional Engineers Registration. This course is designed primarily for off-campus supplementary instruction.

FAR 0008  Family Relationships High School Cr. I
This course places emphasis on the needs and interests of various family members ranging from youngest to oldest and on ways of adapting daily activities and home facilities for greatest satisfaction of family members. Opportunity for consideration of individual problems will be provided.

FAR 0012  Parenting Your Teenager
This course presents the developmental process of adolescence as it occurs within the context of the rapidly changing American family. The course explores several general issues: family communication, values systems, problem solving, conflict resolution, and setting limits. Specific areas such as drug and alcohol use and abuse, sexuality and planning for the future will also be addressed.
FCR 0410 Credit Administration
This course, designed as supplementary training for persons employed in a related field, concerns itself with a statement and discussion of factors influencing and determining loan policies. Methods of credit investigations and analysis, credit techniques, collection methods, specific credit problems, and regular, as well as unusual types of loans, are outlined and discussed.

FCR 0411 Investments
Because the bank's needs for primary reserves and loanable funds limit the funds available for investment, this supplementary training course describes the nature of such funds and how their uses are determined. It also analyzes the primary and secondary reserve needs of commercial banks, the sources of reserves, and their random and cyclical fluctuations, showing the influence of these factors on investment policy. This analysis is followed by a study of yield changes as they affect a bank's long-term holdings.

FCR 0412 Bank Communication
In this course, the student is given an opportunity to study all phases of speech situations. The text is directed primarily to the student already employed in, and seeking to become proficient in, the communication field of banking. This course will help prepare the student in proper procedures on the public platform, and other speech situations. Having studied the basic principles involved in organizing and presenting a speech, the student is given suggestions to aid in developing speaking ability in such situations as conferences, panel discussions, radio, and television.

FCR 0413 Investments Securities
This course is designed as supplementary training for persons already employed in a related field. It helps the student to understand how the stock market works, the important role it plays in our nation's economy, and how it helps people share in the growth of our business enterprises.

FCR 0415 Bank Teller Training
This course is designed as job entry training to enable individuals to quickly function efficiently on the job as new tellers. Also, tellers with experience can strengthen specific skills and become aware of the professional aspects of their jobs. Teller training can improve performance and attitudes towards co-workers and customers.

FCR 0420 Savings and Loan Principles
This course stresses the basic principles of savings and loan organizations and explains the procedures involved in their operation. It is designed specifically as supplementary training for persons employed in a related field.

FCR 0421 Banking Business Administration
In this course, emphasis is placed on the managerial responsibility of coordinating carefully the many facets of a business enterprise. It also stresses the background of administration, financial management, production, labor-management relations, marketing, coordination and control, and public relations problems. It is designed specifically as supplementary training for persons employed in a related field.

FCR 0423 Commercial Law and Banking
This course, designed specifically as supplementary training, is an introduction to law for bankers. Among the legal topics considered are jurisprudence, the court system and civil procedure, contracts, quasi-contracts, property, torts and crimes, and agency. The standard commercial law subjects, including corporations and partnerships, are discussed. Though commercial law principles are broadly presented, attention is concentrated on the Uniform Commercial Code.

FCR 0424 Economics of Banking
This course sets forth the current principles explaining how our economic system operates and is designed specifically as supplementary training for persons employed in a related field. It takes up the determination of relative value in markets with different types of competition, and applies the underlying principles to incomes and commodities. Also includes the basics of international economics and finance, and the limitations and related pitfalls of economics.

FCR 0426 Trust Function Services
This course is designed specifically as supplementary training and presents a complete picture of the services rendered by institutions engaged in trust business. It endeavors to keep clear the distinction between business and legal aspects of trust functions.

FCR 0427 Bank Accounting
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. It is based on a new second edition text that supplies a comprehensive treatment of all up-to-date principles and also gives the student ample opportunity through examples, illustrations, and correlated activities to learn how the principles are applied. End-of-unit summaries have special sections for both principles and managerial implications.

FCR 0431 Analyzing Financial Statements
This course is organized into two main sections: Characteristics of Financial Statements and Financial Statement Analysis. The first section serves as a useful review of basic accounting principles for those students who have studied accounting. For those who have not, this section provides the minimum accounting background necessary for profitable study of financial statement analysis. This course is designed specifically as supplementary training for persons employed in a related field.

FCR 0432 Banking Principles
This course is designed specifically as supplementary training and presents the fundamentals of bank functions in a descriptive fashion so that the beginning banker may view the profession in a broad (and operational) perspective. The descriptive orientation is intentional. Banking is increasingly dependent upon personnel who have the broad perspective so necessary for career advancement.

FCR 0433 Money and Banking
This course is designed specifically for supplementary training for persons employed in a related field. It stresses the practical aspects of money and banking and emphasizes the basic monetary theory needed by the banking student to apply the student's knowledge to the particular job. Historical treatment has been kept to a minimum. Emphasis is also placed on such problems as economic stabilization, types of spending, the role of gold, limitations of central bank control, government fiscal policy, balance of payments and foreign exchange yield curves and the structuring of portfolios.

FCR 0436 Banking Installment Credit
This course is designed specifically as supplementary training for persons employed in a related field. It concisely presents the techniques of installment lending. Emphasis is placed on establishing the credit, obtaining and checking information, servicing the loan, and collecting the amounts due. Each phase of a bank's installment credit operation should be carefully scrutinized to be certain that the most efficient methods are employed, for only through an efficient operation can a bank maximize its profits in this particular kind of credit. Other topics discussed are inventory financing, special loan programs, business development and advertising, and the public relations aspects of installment lending.
FCR 0440  Credit Union
This course is designed to provide the knowledge and tools necessary to make credit union employees more professional and better informed and to attain leadership qualities which are very important today.

FIF 0310  Fire Fighter Minimum Standards Course – Phase I
This course is designed to provide supplementary instruction of area volunteer fire fighters in partial fulfillment of the State Fire Fighter Minimum Standards Curriculum. Specific areas of instruction for this phase include overview of the fire service, apparatus and equipment, fire chemistry and behavior, and tools and small equipment.

FIF 0311  Fire Fighter Minimum Standards Course – Phase II
This course is designed to provide supplementary instruction of area volunteer fire fighters in partial fulfillment of the State Fire Fighter Minimum Standards Curriculum. Specific areas of instruction for this phase include care and use of protective breathing equipment, ladders, types and use of portable fire extinguishers.

FIF 0312  Fire Fighter Minimum Standards Course – Phase III
This course is designed to provide supplementary instruction of area volunteer fire fighters in partial fulfillment of the State Fire Fighter Minimum Standards Curriculum. Specific areas of instruction for this phase include fire streams, fire extinguishment, forcible entry, and fireground salvage work.

FIF 0313  Fire Fighter Minimum Standards Course – Phase IV
This course is designed to provide supplementary instruction of area volunteer fire fighters in partial fulfillment of the State Fire Fighter Minimum Standards Curriculum. In this phase specific instruction is provided in the construction, care, and proper use of fire hose.

FIF 0314  Fire Fighter Minimum Standards Course – Phase V
This course is designed to provide supplementary instruction of area volunteer fire fighters in partial fulfillment of the State Fire Fighter Minimum Standards Curriculum. Specific areas of instruction for this phase include fire building overhaul practices, ventilation, fireground rescue, in-service inspections, and emergency vehicle operations.

FIF 0315  Fire Fighter Minimum Standards Course – Phase VI
This course is designed to provide elementary instruction of area volunteer fire fighters in partial fulfillment of the State Fire Fighter Minimum Standards Curriculum. In this phase specific instruction is provided in first aid in the fire service.

FIF 0316  Fire Fighter Minimum Standards Course – Phase VII
This course is designed to provide supplementary instruction of area volunteer fire fighters in partial fulfillment of the State Fire Fighter Minimum Standards Curriculum. Specific instruction is provided in liquid, structural, gas and electric burns.

FIF 0411  Fire Fighters' Leadership Course
This course is designed to provide fire service officers with leadership techniques and skills. It will include leadership types, responsibility of leadership, fire fighting tactics, etc. Note: course is restricted to in-service personnel.

FIF 0413  Fire Pump Operators Course
The student will be introduced to the operation and care of fire pumps. In addition, the student will be provided with an understanding of pump construction and the working principles surrounding its operation. Note: course is restricted to in-service fire fighters.

FIF 0415  Fire Officer Instructor Course
This course is designed for persons already employed in the field. The student will learn the purpose and types of training necessary in fire department operations. In addition, selection criteria for instructors and utilization of training equipment will be presented.

FIF 0417  Fire Stream Practices
The student will be provided with instruction pertaining to various kinds of pressure, friction loss formulas, etc. In addition, supplying standpipe, sprinkler system, and snorkel will be addressed. Note: course is limited to in-service fire fighting personnel.

FIF 0418  Fire Ground Tactics and Procedures
Students will be provided with instruction concerning the development of principles dealing with command and control, familiarization with apparatus tools and equipment, fire ground strategy, etc. Note: course is restricted to in-service fire fighters.

FIF 0419  Aerial Ladder Operations
The fire fighter will be instructed in trusses and construction, hydraulic systems, stabilizing jacks, ladder pipes, etc. Note: course is limited to in-service fire fighting personnel.

FIF 0420  Hazardous Materials
This course is divided into two sections. The first of these deals with why materials explode, why they are unstable, and how they react with water, air, and each other. The second section explores toxicity.

FIF 0422  Fire Fighter Minimum Standards Course
This course is designed to prepare a student for certification and initial employment as a fire fighter in the State of Florida. Successful course completion will qualify a student to take the minimum standard written, oral, and practical examination as administered by the Bureau of Fire Standards and Training. Note: course is restricted to individuals sponsored with intent of employment by area fire departments.

FIF 0424  Emergency Vehicle Operations Course
This course is designed for supplementary training and will focus on the construction, maintenance, use, and operation of fire service vehicles. Attention is given to vehicle nomenclature, safe driving practices, apparatus operations, and safety.

FMC 0311  Office Practice
This course is designed specifically as supplementary training for persons in a related field. Instruction includes filing, ten-key adding machine, key driven and electronic calculator, duplicating (spirit and mimeograph), and basic record keeping.

FMC 0312  Office Machines
The types of machines used in a particular class are determined by the needs of the group for whom instruction is provided. Emphasis is placed on the use of the machines in the bookkeeping process. Content of the course is selected from realistic business problems and actual business forms. This course is designed as supplementary instruction for persons already employed in the field, or in a related field.
FMC 0320  Office Practice I  
High School Cr. 1/2
This is a course designed to give students an understanding of important clerical functions performed in offices and to develop a comprehension of the application of these functions to related office procedures. Units covered will include basic skills for office jobs; processing data, mailing and shipping services, business filing, records management, receptionist duties, and telephone and telegraph services.

FMC 0322  Office Practice II  
High School Cr. 1/2
Prerequisite: FMC 0320. This is a course designed to give students an understanding of important clerical functions performed in offices and to develop a comprehension of the application of these functions to related office procedures. Units covered will include producing marketable letters, office typewriting, purchasing and receiving, selling, inventories, financial duties, copying and duplicating, and a business career.

FMC 0324  Office Machines I  
High School Cr. 1/2
A study of the ten-key adding machine, printing calculator and electronic calculator, including a practice set using the machines studied. The course develops skills in solving business problems.

FMC 0326  Office Machines II  
High School Cr. 1/2
Prerequisite: FMC 0324. Advanced work on the common office machines used in FMC 0324. The course entails development of percentages, ratios, and the mathematical formulae used in business operations.

FMD 0010  Industrial Supervision and Foremanship  
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. It includes training in the supervision of workers by studying and interpreting blueprints, sketches, and written or verbal orders, determining procedure of work, assigning duties, and inspecting work of quality and quantity production; timekeeping, production record keeping, and other record keeping, employment, training, and discharging workers, and setting up and inspecting equipment prior to regular operation and other areas necessary for successful supervision.

FMD 0390  EMP Industrial Supervisory Development  
This course will be designed to meet the needs of employers and underemployed persons in industry.

FMD 0395  EMP Construction License Review  
This course is designed as supplementary training to assist students in obtaining necessary skills to pass the construction licensing examination.

FON 0002  Nutrition  
This course, designed for homemakers, includes a study of the basic principles of nutrition and their application, the relation of food selection to health, and ways to improve poor dietary practices. Attention is given to planning and preparing family meals which may be easily adapted to the special needs of all age groups. Concepts in management, consumer education, sanitation, and safety are taught as they relate to instruction.

FON 0003  Basic Principles of Nutrition  
This course is designed as supplementary instruction for persons working in a related field, and includes a study of the basic principles of good nutrition and the relation of food selection to health. The aim is to interpret nutrition in terms of its practical application in planning, preparing, and serving meals and relating these meals to the other food for the week. It also aims to develop an understanding of daily dietary allowances for various age groups and the responsibility for providing these. It includes information on foods with maximum nutritive value and how to purchase, store, and prepare them in order to retain these values to the maximum.

FON 0007  Low Calorie Cooking  
The student will acquire knowledge and demonstrate skill in planning and preparing meals designed to promote weight loss. The student will study labels from prepared foods labeled "low calorie" or "dietetic" as opposed to non-dietetic brands. Ways to make low calorie dishes attractive and palatable will be emphasized. This course is specifically designed for homemakers.

FON 0010  Nutrition for Seniors  
This course, developed especially for seniors, includes a study of the elementary principles of nutrition; the relation of food selection to health; and ways to improve poor dietary practices. Particular attention will be given to the nutritional needs of senior citizens in order to promote better health in the older adult and prevent illness often associated with poor eating habits.

FON 0015  Low Calorie Cooking for Seniors  
This course is specifically designed for senior adults to increase knowledge and improve skills in planning and preparing meals designed to promote weight loss. The senior adult will study labels in order to understand the differences between "low-calorie" and "dietetic" foods as compared with "non-dietetic" products. A study of food additives is also included. This course will teach the senior adult to make low-calorie food selections that are both nutritional and appealing and that may be used for every occasion.

FON 0020  Low Cholesterol Cooking for Seniors  
This course is specifically designed for senior adults. The student will acquire knowledge and skill in planning and preparing foods recommended by physicians and the Heart Association for the older adult requiring diets low in cholesterol. Techniques for including these foods in family meals will be emphasized, considering individual preferences and specific needs of the older family member.

FON 0109  Bread Making  
This course includes a study of the ingredients and techniques involved in making and baking a variety of breads. Included will be a study of nutritive values, ingredients, methods of mixing, baking, storage and service of breads. Quick and yeast breads including sour dough breads and starters will be emphasized, as well as breads of foreign countries. This course is designed as supplementary instruction for homemakers.

FON 0110  Specialized Foods  
This course includes a combination of theory and laboratory and community experiences. Major concepts include aesthetics of food; planning, selecting, preparing, serving and storing foods for special occasions; foreign cookery; creative cookery; alternative ways of serving food; food preservation methods; food garnishing; energy saving food preparation methods; and techniques in using specialized tools and equipment. Concepts in management, safety, free enterprise, and consumer and economic education are taught as they relate to instruction.

FSM 0312  Quantity Cookery  
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. The student will learn proper procedure to improve quality and quantity of food served. It includes principles and techniques of quantity food production. Actual preparation of
foods in quantity provides on-the-job experiences using principles and techniques learned. Trainees learn proper use and care of equipment, use of available serving tools to assure adequate portions, and gain comprehensive experience in calculating and recording quantities of food used, adjusting and standardizing recipes for numbers to be served.

FSM 0314 Supervised Food Service Worker
This course is designed to prepare persons for employment in the food service area. The student will work, under supervision, in the preparation and serving food in institutions such as hospitals, home for the aged, nursing homes, children's homes, and day-care centers. Follows hygienic practices in preparing food for cooking, during the cooking process, serving and storing; follows safety regulations in use of all types of equipment and the handling of hot foods; uses the basic skills required in preparation of standard large quantity recipes for vegetables, salad and dressings, milk cookery, egg cookery, soups, meat, fish and poultry, quick breads, sandwiches and desserts; serves food at table or on trays according to situation. The student will organize work in relation to work space and within time limitations.

FSM 0315 Food Service Supervision
This course is designed for persons already employed in the field, or in a related field, for supplementary instruction which includes orientation to the food service department, organization and ethics, nutrition, menu making and planning, merchandising and procurement of food, principles of food preparation and service, housekeeping, safety, sanitation and personal hygiene supervision. Skills acquired prepare students for supervisory roles in hospitals, institutions and extended care facilities, day care centers, kindergartens, and homes for the aging. Suggested hours of training - 90 hours class work and 36 weeks evaluated work experience.

FSM 0317 Basic Food Preparation
This course is designed for homemakers, to include purchase procedures; use, care, storage and arrangement of equipment; and management of human material resources. Specialized activities include experiences in planning, preparing, and serving food for a variety of occasions.

FSM 0318 Supervised Food Service Worker
High School Cr. 1
The student taking this course works under supervision in the preparation and serving of food in institutions such as hospitals, homes for the aged, nursing homes, children's homes, and day-care centers. The student follows hygienic practices in preparing food for cooking, during the cooking process, serving and storing; follows safety regulations in use of all types of equipment and the handling of hot foods; uses the basic skills required in preparation of standard large quantity recipes; serves food at table or on trays according to situation; and organizes work in relation to work space and within time limitations.

FSM 0320 Catering I
This course is designed as supplementary training for persons employed in home or commercial catering. Instruction includes: menu planning for catered events; preparation and service of foods; purchase, use and care of equipment. Management of time and money; sanitation and safety; decoration and service of foods for special occasions. Special activities include field trips to commercial caterers and participation in commercially catered affairs.

FSM 0322 Catering II
This course is designed to provide supplementary instruction and give students an opportunity to apply knowledge and skills needed for home and commercially catered events. Instruction includes business practices, management, portion and cost control, and record keeping. Specialized activities include the actual catering of several events by the students.

FSM 0330 Basic Food Preparation for Seniors
This course is designed for senior adults, to include purchase procedures; use, care, storage and arrangement of equipment, and management of human and material resources. Specialized activities include experiences in planning, preparing, and serving food for a variety of occasions, developed in accordance with the senior adult's specific requirements; considering special needs and limited funds of today's senior citizen.

FSM 0510 Advanced Foods
This course is designed as supplementary instruction for homemakers and includes the more specialized preparation of food for family meals such as meats, seafoods, poultry, vegetables, and desserts. Consideration will be given to budgeting, marketing, and storing foods, as well as table service for all occasions.

FSM 0514 Food Service Management
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. The course will assist employees in finding and solving problems of quantity food service. It includes characteristics of a good food service, and its place in the total education program with comprehensive overview of the principles of menu planning, purchasing, food preparation and service, equipment use and care, sanitation and safety, personal cleanliness and grooming, and the value of a good working relationship within the organization and with the school community. Emphasis is placed upon the need for greater knowledge in operating school food services, to insure maximum benefits to the children and the need for continuous training.

FSM 0518 Sanitation and Safety
The student will explore the scientific rationale for sanitation and safety practices which are emphasized for group protection in institutions and food service facilities. The student will identify causative agents of food-borne illnesses and demonstrate preventive techniques by adhering to sanitation standards. Emphasis is placed on methods of accident and fire prevention.

FSM 0520 Food Service Apprenticeship I
The student will acquire knowledge and skills needed by a professional cook in the food service industry, including orientation; sanitation, safety, and first aid; basic principles of cooking and meat preparation; use and care of equipment and other skills specified in the apprenticeship standards. Enrollment is limited to students who meet standards prescribed by the National Apprenticehip Training Program of the Educational Institute, American Culinary Federation. The duration of the remaining program is three years. The program is comprised of three courses.

FSM 0521 Food Service Apprenticeship II
The student will acquire knowledge and skills needed by a professional cook in the food service industry, including restaurant cookery; stocks, soups and sauces; vegetable preparation and cookery and other skills specified in the apprenticeship standards. Enrollment is limited to students who meet the standards prescribed by the National Apprenticehip Training Program of the Educational Institute, American Culinary Federation. The duration of the training program is three years. The program is comprised of three courses.

FSM 0522 Food Service Apprenticeship III
The student will acquire knowledge and skills needed by a professional cook in the food service industry, including: broiling, grilling and frying; breakfast cookery; baking, pantry operations; and other skills specified in the apprenticeship standards. Enrollment is limited to students who meet the standards prescribed by the National Apprenticehip Training Program of the Educational Institute, Ameri-
can Culinary Federation. The duration of the training program is three years. The program is comprised of three courses.

**FSM 0525 Child Care Food Handler's and Manager's Course**
This course is designed to offer child care food handlers and managers with information on sanitation; nutrition and meal planning; child development; accounting and record keeping; and food purchasing and service.

**GMR 0310 Cashier/Sales/Checker**
This course is designed specifically for job entry training and includes instruction in the proper finger method of recording amounts on a cash register; properly departmentalize sales; handle taxable items; process actual merchandise orders, handle cash, and balance cash drawers.

**GRA 0310 Printing**
This course is designed specifically for job entry training. This course consists of offset camera, platemaking, stripping, and small offset presses; letterpress composing, binding and letterpress printing, including hand fed and automatic presses.

**HEE 0110 In-Service Training for Home Economics Teachers**
This course is designed to provide in-service training for part-time instructors in Home Economics programs. The course includes how adults learn, as well as teaching techniques and learning activities in relation to predetermined goals.

**HEF 0101 Slipcover Construction**
Course work includes instruction for homemakers in fabric selection, techniques of handling various fabrics, making cord, fitting cord to corners, and inserting zippers. Care of slipcovers is also included. This course is designed for persons already employed in the field, or in a related field, for supplementary instruction; however, intensive study could develop job entry level skills.

**HEF 0102 House Design**
This course is designed for homemakers as supplementary instruction. It involves the functional planning of interiors. There will be a series of exercises in analyzing and evaluating plans to develop good judgment when buying or building a house. These exercises will cover the following aspects: family living and needs in a house; choosing a site; climate; construction blueprints; plumbing; heating, and electrical provisions; historic backgrounds of houses; architectural style and understanding the architect's role; evaluating a ready-built place; legal guides; planning kitchens and storage areas; remodeling an old house; landscaping design; field trips to reinforce classroom exercises.

**HEF 0103 Interior Design High School Cr. 1**
This course includes a study of the ways in which attractive and livable interiors can be planned in relation to individual and family housing situations and incomes, choosing and combining line, color, design and various materials, and wall, window, and floor treatments as they relate to other phases of decoration. Practical information concerning choice of furnishings and equipment will be included. This course may include construction of slipcovers, draperies, curtains, and bedspreads.

**HEF 0104 Interior Design**
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. It includes a study of the ways in which attractive and livable interiors can be planned in relation to individual and family housing situations and incomes, choosing and combining line, color design and various materials, and wall, window and floor treatments as they relate to other phases of decoration. Practical information concerning choice of furnishings and equipment will be included. This course may include construction of slipcovers, draperies, curtains, and bedsprads.

**HEF 0105 Advanced Interior Design**
This course is designed as supplementary interior design instruction for the person who has completed HEF 0104, Interior Design. It includes advanced study of the elements and principles of design.

**HEF 0310 Drapery Construction**
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. Course work includes instruction in choosing fabrics, construction of various types of curtains and draperies, and selection of hardware. A comparison of cost factors is also included. Intensive study could develop job entry level skills.

**HEF 0312 Furniture Reupholstery**
This course includes the selection of tools, materials and equipment; use of power equipment; dismantling of furniture; basic construction processes; fitting the muslin cover; planning and preparing the fabric platform cover; planning and preparing the panels, outside and trimmings; pleated skirts, dust ruffles, and making cushions. This course is designed for persons already employed in the field, or in a related field, for supplementary instruction; however, intensive study could develop job entry level skills.

**HEF 0313 Advanced Reupholstery**
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. This course includes channeling, tufting, making skirts, repairing, and spot touch-up of furniture, color and color schemes, and headboards; however, intensive study could develop job entry level skills.

**HOF 0001 Household Care, Repair, and Maintenance**
This course is designed as supplementary instruction directed toward making the home owner self-sufficient in handling minor care, repair, and maintenance problems. The content includes problems with electric power, plumbing emergencies, care and repair of floors and floor coverings, interior painting, wallpapering, furniture care and repairs, miscellaneous repairs, tools needed, safety, and combating pests and fungi.

**HOF 0002 Home Accessories**
This course is designed as supplementary instruction, and includes application of techniques and skills in making new, or reworking used, accessory items for the home. Project possibilities: bedspreads, dust ruffles, pillow shams, ottomans, hassocks, wall hangings, lamps, lampshades, curtains, window shades, linens, waste baskets, storage boxes, candle making, candle holders, small brided or hooked rugs, and other accessory furnishings in which an interest may be expressed by students.

**HOF 0003 Seasonal Home Accessories for Seniors**
This course, which requires basic sewing skills, is designed for the senior adult who is interested in learning to make accessories for special occasions and celebrations, i.e., holiday decorations, centerpieces, bell pulls, tablecloths, favors, etc.

**HOF 0005 Specialized Housing and Home Furnishings**
The course includes a combination of theory, laboratory experiences and community experiences. Major concepts include: planning, selecting and utilizing equipment, furniture, accessories and household textiles; furniture renovation; energy conservation; home improvements; and, home
maintenance. Concepts in management, safety, free enterprise, consumer and economic education are taught as they relate to instruction.

HOF 0010 Home Accessories for Seniors
This course is designed as an introduction to basic skills and techniques in making new, or re-working used, simple accessory items for the home. Project wall hangings, waste baskets, storage boxes, latch hook rugs, table runners place mats, and other simple accessory furnishings in which an interest is expressed by the students.

IEL 0309 Construction Electricity I
This course is designed specifically for job entry training which includes the installation of wiring systems and lighting fixtures in buildings, including laying conduit, installation of switch panels, pulling wire, splicing, testing circuits, line construction, and performing other duties and jobs required of an electrician.

IEL 0310 Construction Electricity II
Continuation of IEL 0309.

IEL 0311 Construction Electricity III
Continuation of IEL 0310.

IEL 0315 Construction Electricity
This course is designed primarily for apprenticeship instruction, and its contents will include the proper procedure for installation of wiring systems and lighting fixtures in buildings, including laying conduit, installation of switch panels, pulling wire, splicing, testing circuits, line construction, and performing other duties and jobs required of an electrician.

IEL 0316 Electric Wiring
This course is designed as supplementary instruction for persons already employed in the field, or in a related field. The student will be trained in installation of wiring systems and lighting fixtures in buildings, including laying conduit, installation of switch panels, pulling wire, splicing, testing circuits, line construction, and performing other duties and jobs required of an electrician.

IEL 0317 Electric Wiring
This course is designed primarily for apprenticeship instruction and its contents will include the proper procedure to install wiring systems and lighting fixtures in buildings, including laying conduit, installation of switch panels, pulling wire, splicing, testing circuits, line construction, and performing other duties and jobs required of an electrician.

IEL 0390 EMP Construction Electricity
This course is designed to meet the needs of employers and underemployed employees in the construction electricity industry.

INM 0010 Home Management/Personal Safety for the Blind
This course focuses on the various abilities needed by blind adults for independent living. In the area of home management, the student will be introduced to problems of maintaining a home effectively, including budgeting, nutrition, and techniques allowing a blind person to cook safely and clean efficiently. In the Communication Component, the student may learn Braille, typing, the use of handwriting aids designed for the visually impaired and the use of electronic equipment. Personal safety is emphasized in orientation and mobility training which enables a person to move about the environment safely and to master skills necessary for independent travel.

INS 0210 Principles of Insurance
This course, designed specifically as supplementary training, will seek to develop principles that can be used in understanding insurance companies' contracts and practices. The approach will be essentially functional. Emphasis will be on the presentation of principles and explanations of practices. Methods of comparing the relative cost will be presented.

INS 0220 CLU - Investments and Family Financial Management
This course is designed specifically as supplementary training and includes a study of various aspects of investment principles and their application to family financial management. Included are the subjects of yields, limited income securities, growth factors, and analysis of financial statements. Also discussed are family budgeting, property insurance, mutual funds, variable annuities, and aspects of other investment media.

INS 0222 CLU - Life Insurance and Company Operations
This course is designed specifically as supplementary training and includes a study of legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, disposition of life insurance proceeds, and settlement of claims. Also, the course discusses types of insurers, risk selection, company investments, financial statements, and regulation and taxation of companies.

INS 0224 LUTC - Personal Insurance
This course is designed specifically as supplementary training and includes a study of the value of life insurance; qualities of a successful life agent; the life agent's work, habits, and self-discipline; self-evaluation; what life insurance is capable of providing; how to convert to commission dollars; the prestige of the life agent; programming; and the keys to the sale.

INS 0225 LUTC - Business Insurance
This course is designed specifically as supplementary training and includes study of sales and purchase agreements; analysis of life insurance needs in the business market; professional stature; the business insurance approach; the key man; the language of business; how life insurance can be used to offset losses due to taxes; probate costs; attorneys' fees; final expenses in liquidation; on-the-spot successful sales presentations; and techniques used to acquaint business owners with the perils they face.

INS 0226 LUTC - Disability Income Insurance
This course is designed specifically as supplementary training and includes a study of the growing need for coverage; public awareness; advantage of being a switch hitter; steps in becoming an income replacement specialist; tax advantages of disability income insurance; and overcoming objections.

INS 0228 CLU - Pension Planning
This course is designed specifically as supplementary training and includes a study of the basic features of private pension mechanisms, including tax consideration, cost factors, funding instruments, profit-sharing plans and tax sheltered annuities.

INS 0229 CLU - Economics
This course is designed specifically as supplementary training and includes a study of economic principles, the government and banking institutions which have an effect on the national economy, national income, theory and application of price determination, business cycles, money and banking, international trade and finance, and problems of economic growth.

INS 0230 LOMA - Fundamentals of Life Insurance
This course is designed specifically as supplementary training and includes a study of the nature of modern life insur-
ance, plans for life insurance, the level premium system, terms of the policy, legal aspects of life insurance, death and disability claims, health insurance, industrial insurance, group insurance and social security.

INS 0231  LOMA - Life Company Operations
This course is designed specifically as supplementary training and includes a study of the different types of life insurance organizations, home office and field office organization, mortality tables, premium calculation, risk selection, re-insurance, governmental regulation and taxation, investments of life insurance companies, financial statements, and new ideas and planning in the business of life insurance.

INS 0232  LOMA - Legal Aspects of Life Insurance
This course is designed specifically as supplementary training and includes a study of how the life insurance contract is formed and made valid, the rights of the policy owner and beneficiary, and the life insurance contract in operation.

INS 0233  LOMA - Life Insurance Accounting
This course is designed specifically as supplementary training and includes a study of elementary commercial bookkeeping, classifications of transactions, insurance entries, investment operations, punched card data processing, and fiscal period reporting.

INS 0234  LOMA - Economics and Investments
This course is designed specifically as supplementary training and includes a study of economics, income and growth, financial organizations, money and banking, income distribution, investment and security purchasing and purpose.

INS 0235  LOMA - Mathematics of Life Insurance
This course is designed specifically as supplementary training and includes a study of life insurance mathematics, compound interest, relation of mathematics to annuities, how to calculate premiums, reserves, dividends, and non-forfeiture values.

INS 0236  LOMA - Office Administration - Agency and Home Office
This course is designed specifically as supplementary training and includes a study of office organization, sales organization, office management, systems, data processing, office layout and personnel.

INS 0237  LOMA - Advanced Life Insurance
This course is designed specifically as supplementary training and includes instruction to provide students with more detailed knowledge of life insurance and company operations. It is intended primarily for career employees who wish to do intensive study in the business operations of a life insurance company and its more intricate characteristics. This course is considered to be a collegiate level offering and is divided into six parts. Parts 3-7 are considered to be core subject areas and Part 8 is listed as a specialized field of interest.

INS 0240  CLU Advanced Estate Planning
This course is designed specifically as supplementary training and includes a study of tax laws affecting estate planning (estate and gift income taxation of trusts and estates, and state death taxes) and the instrumentalities used in estate planning (wills, trusts, life insurance, business purchase agreements, powers of appointment and others) along with fact finding, analysis of facts, and presentation of a proposal. This course is designed for CLU's, CPAs, lawyers and trust officers.

INS 0241  CLU - Individual Life - Health Insurance
This course is designed specifically as supplementary training and includes a study of the role of life and health insurance in meeting economic security needs, types of individual and special life and annuity contracts, individual health insurance contracts including disability and medical expense insurance, and the arithmetic of life insurance as related to premiums, reserves, non-forfeiture values, surplus, and dividends.

INS 0242  CLU - Group Insurance
This course is designed specifically as supplementary training and includes an analysis of group life and group health insurance, including disability income and medical expense plans, marketing, underwriting, reinsurance, premiums, and reserves. Also, the course discusses socio-economic problems related to old age, unemployment and disability, and various plans that have been developed to meet these problems.

INS 0243  CLU - Income-Estate, Gift Tax
This course is designed specifically as supplementary training and includes a study of the federal income tax system with particular reference to the taxation of life insurance and annuities. The course deals with the income taxation of individuals, sole proprietorships, partnerships, corporations, trusts and estates.

INS 0244  CLU - Accounting and Finance
This course is designed specifically as supplementary training and includes a study of basic accounting principles, data accumulation systems, income measurement, valuation of assets and liabilities, and financial statement analysis. Also, the course includes business financial activities related to budgeting, short and long-term financing, and other items which will help the CLU candidate to better appreciate how life and health insurance fit into the financial structure of a business.

INS 0245  CLU - Business Insurance
This course is designed specifically as supplementary training and includes a study of business uses of life and health insurance, and partnership and corporation continuation problems and their solution through use of buy-sell agreements properly funded to preserve and distribute business values. Also discussed are other business uses of life and health insurance, and a section of human behavior and ethics in life underwriting.

INS 0255  CLU - Estate Planning
This course is designed specifically as supplementary training and includes a study of advanced subjects in life underwriting, emphasizing estate planning, disposition of property, administration of the property in trusts and estates, taxation of estates and gift transfers, and the effective use of life insurance toward minimizing financial problems. Note: The CLU Course 10 Examination must be taken last, or concurrently with any remaining examinations in the ten-course series for which a candidate needs credit.

INS 0256  CLU - Wealth Accumulation Planning
This course provides to persons currently employed or have previously been employed in the insurance field (Chartered Life Underwriters) an in-depth coverage of real estate investment, formation of limited partnerships and tax shelter investments, and retirement planning. A student will gain additional knowledge and skills in planning for the living estate, reduction of the tax burden, protection of accumulated wealth, education for children and planning retirement.

INS 0260  Personal Lines Underwriting
The course presents the underwriting decision-making process to personal lines insurance. Also provides an in-
depth analysis of underwriting factors and the pricing of various types of personal lines insurance. The course provides preparation for the Insurance Institute of America (IIA) national examination; UND 62, Associate in Underwriting. Prerequisites recommended — 2 parts of the INS courses or completion of the Principles of Property and Liability Underwriting or equivalent underwriting experience.

INS 0262 Principles of Property and Liability Underwriting

The course is an introduction to the insurance underwriting function and analysis of the underwriting decision-making process. The course covers both individual risk underwriting and the underwriting management of written accounts. Other topics covered are: uses of reinsurance; analyzing underwriting information; communicating with producers; monitoring underwriting results; and principles of rate making. The course provides preparation for the Insurance Institute of America (IIA) national examination; UND 61, Associate in Underwriting. Prerequisites recommended — 2 parts of the INS courses (INS 21, 22 & 23) and/or 2 years underwriting experience or equivalent.

INS 0265 Commercial Property and Multiple-Lines Underwriting

This course presents the techniques of the underwriting decision-making process to the commercial property lines of insurance. There is heavy emphasis on analyzing frequency and severity of fire and other perils, real and personal property exposures and controls, indirect loss exposures, and marine risk. The course provides preparation for the Insurance Institute of America (IIA) national examination; UND 64, Associate in Underwriting. Prerequisites recommended — completion of Principles of Property and Liability Underwriting and Commercial Liability Underwriting or equivalent underwriting experience.

INS 0267 Commercial Liability Underwriting

This course presents the techniques of the underwriting decision-making process for the commercial liability lines of insurance. The course case studies cover not only the major types of commercial liability insurance (auto, general liability, worker compensation, products and professional liability), but also the handling of special accounts and large risks. The course provides preparation for the Insurance Institute of America (IIA) national examination; UND 63, Associate in Underwriting. Prerequisites recommended — completion of either Principles of Property and Liability Underwriting or equivalent underwriting experience.

ITR 0010 Export and Import Practices

This course is designed as supplementary instruction for persons already employed in the field, or in a related field. It provides training for entrance into the export and import business. Preparation of forms for import and export duties and taxes on different classes of merchandise is included.

LAE 0310 Basic Recruit Training for Police Officers

This basic course is designed specifically to provide job entry training to give each student the basic knowledge and understanding required to satisfactorily perform the duties and responsibilities of the police patrol person. Specific areas of instruction include constitutional and criminal law, criminal evidence, court organization and procedures, patrol procedures, criminal investigation, police community relations, traffic control, juvenile procedures, civil disturbances, first aid, defensive tactics and firearms training. Note: Course is restricted to individuals sponsored with intent of employment by area law enforcement agencies.

LAE 0410 Police Refresher Course

This course is designed to provide supplementary instruction of area law enforcement personnel. Specific areas of instruction include criminal law, criminal evidence, investigations, patrol procedures, traffic control, juvenile procedures, defensive tactics, firearms and first aid.

LAE 0411 Police Intermediate Course

This course is designed to provide supplementary instruction of area law enforcement personnel. Specific areas of instruction include the criminal justice system, law and legal procedures, police community relations, basic police procedures and techniques, police and traffic engineering, and firearms.

LAE 0412 Police Advanced Course

This course is designed to provide supplementary instruction of area law enforcement personnel. Specific areas of instruction include police supervision, basic staff work, advanced police procedures and techniques, and current law and court decision.

LAE 0413 Police Supervision Course

This course is designed to provide supplementary instruction of area law enforcement personnel. Specific areas of instruction include principles of organization and management, techniques of working with people, plans and development, and personnel selection and training.

LAE 0414 Police Mid-Management Course

This course is designed to provide supplementary instruction of area law enforcement personnel. Specific areas of instruction include organization and management, decision making and planning, working with people, personnel developmental and evaluation, police records, operations, and current court decisions.

LAE 0415 Police Executive Development Course

This advanced course is designed to provide police administrative officers with an in-depth appreciation of their role and the forces bearing on it. The course provides for analysis of current dimensions of the managerial role to bring new perspectives to analyzing the police administrator's problems. Specific areas of instruction include the nature of managerial responsibility, development of a philosophy of management, development and maintenance of a sound organization and behavioral climate, and the effective use of financial resources.

LAE 0416 Specialized Law Enforcement Training

This course is designed to provide supplementary specialized instruction of area law enforcement personnel. Specific areas of instruction include numerous highly specialized subjects such as investigations of auto theft, burglary, counterfeiting, forgery, gambling, robbery and sex crimes; control of riots and violent civil disorders; crisis intervention; explosives and incendiary devices; forensic pathology and autopy procedures; and tactical operations.

LAE 0417 Basic Evidence Technician Course

This course is designed to provide area police personnel supplementary specialized instruction required for qualification and assignment as an evidence technician. Specific areas of instruction include crime scene procedures; collection, preservation and identification of physical evidence; crime scene sketching; types of examinations; and photography.

LAE 0422 Tests for Intoxication

The student is instructed in the operation of a precision breath testing instrument and the operational principles and design functional features. In addition, the historical, technical, and legal background surrounding chemical testing is discussed. The procedures for processing a suspect, gathering and recording evidence, and maintaining the chain of evidence are also presented. Note: This course is
restricted to in-service law enforcement personnel seeking State (Florida) certification.

**LAE 0525 Police Instructor Techniques Course**

This course is designed to provide supplementary specialized instruction of area law enforcement personnel. Specific areas of instruction include development of climate for student participation, factors related to student learning, role versus conceptual learning, the instructor's role, course development, demonstrations and use of training aid and resource material, and evaluation techniques.

**LAE 0526 In-Service Law Enforcement Training**

This course is designed to provide supplementary in-service instruction of area law enforcement personnel. Specific areas of instruction include numerous subjects such as accident investigation, arrest procedures, crime scene procedures, criminal law, first aid, firearms, human relations, juvenile diversion, investigation, organized crime, police discretion, patrol techniques, search and seizure, traffic law enforcement, and uniform crime reporting.

**LAE 0527 Auxiliary Law Enforcement Training**

This course is designed to provide supplementary instruction of several categories of auxiliary law enforcement personnel, including police reserves, service technicians, civilian supervisors, the various specialized posses, police explorers and parking enforcement specialists. Specific areas of instruction include basic law for police, administration of criminal law, investigations, patrol procedures, police community relations, civil disorders, traffic control, defensive tactics, firearms, first aid, and various areas designed for the specific mission of the auxiliary group.

**MAM 0010 Business Management**

This course is designed specifically as supplementary training for persons already employed in the field. It seeks to develop an understanding of economic and social environment within which business functions. Practice in decision making and management functions is discussed, including financial, marketing, production, and legal matters. This is a ten-week course, meeting one night a week for three hours.

**MAM 0012 Operating a Small Business**

This course is designed as supplementary training for operators of small businesses. The course includes topics such as capital and finance, proprietorship, laws regulating business, taxation, management and organization, personal budgeting and cash flow, and marketing research.

**MAM 0014 Distributive and Mid-Management Education Seminars**

A series of seminars designed as supplementary instruction for persons already employed in such an area of interest as Insurance, Real Estate, Transportation, Banking, and Hotel/Motel/Restaurant Operations, to be offered in response to community and/or industry demand at such times and in such places as will permit maximum participation by interested groups.

**MAM 0020 Floral Industry Management**

This course is designed to upgrade employees in the floral industry. Emphasis will be placed on practices and problems in retail floral management, such as facility planning, merchandising, selling and markup, personnel relations, advertising, and new design techniques.

**MAO 0390 EMP Shipfitting**

This course is designed to meet the needs of employers and underemployed employees in the shipfitting industry.

**May 0309 Brick and Blocklaying I**

This course is designed specifically for job entry training in laying brick, terra cotta, hollow tile, stone, and similar building blocks in the construction of walls, partitions, arches, fireplaces, chimneys, smokestacks, and other structures.

**May 0310 Brick and Blocklaying II**

Continuation of MAY 0309.

**May 0311 Brick and Blocklaying III**

Continuation of MAY 0310.

**May 0312 Brick and Blocklaying**

This course is designed as supplementary instruction for persons already employed in the field, or in a related field. The student will learn proper procedure for laying brick, terra cotta, hollow tile, stone, and similar building blocks in the construction of walls, partitions, arches, fireplaces, chimneys, smokestacks, and other structures.

**May 0315 Brick and Blocklaying**

This course is designed primarily for apprenticeship instruction and its contents will include training in laying brick, terra cotta, hollow tile, stone, and similar building blocks in the construction of walls, partitions, arches, fireplaces, chimneys, smokestacks and other structures.

**MEA 0310 Medical Assisting**

The medical assistant course of study is an intensive course designed specifically for job entry training and planned to orient the individual to a multitude of basic skills in the physician's office. Examples of these skills are secretarial practices and procedures, examining room techniques, and laboratory procedures. This course requires 1,080 hours, which includes clinical practice in the physician's office. Applicants must be able to type 35 words per minute.

**MEY 0390 EMP In-Plant Industrial Training**

This course will be designed to meet the needs of the employees and their employees.

**MKA 0010 Sales Training**

This course teaches supplementary skills and techniques used in selling situations. It is designed to make the student understand why, when, and how to respond to a customer's needs, interests, fears, objections, doubts, and wants. Upon completion of this course, the student should be aware of the interactions as they occur and through continued use of the skills will become a more effective communicator and sales representative.

**MLS 0930 Panorama of Advances in Medical Technology**

This course is a seminar on the normal and pathologic physiology of the varied elements of the blood. The student's knowledge of principles of medical laboratory science will be expanded and updated in this area.

**MSH 0003 Machine Shop**

This course will include safe work habits, good workmanship, accuracy and job pride. Students will be urged to perform in up-to-date and modern methods of work operations. The course is designed to provide students with both the practical experience and the related information. Emphasis will be on drafting, blueprint reading and related mathematics. A step by step series of lessons will be presented throughout the course. Each student will be given a considerable amount of individual instruction along with manipulative skills. This course is designed primarily for off-campus supplementary instruction.
MSH 0309  Machine Shop Work I
This course is designed specifically for job entry training in the construction and repair of all kinds of metal parts, tools, and machines, and in the operation of all machine tools, including lathes, milling machines, planers, shapers, and drill presses.

MSH 0310  Machine Shop Work II
Continuation of MSH 0309.

MSH 0311  Machine Shop Work III
Continuation of MSH 0310.

MSH 0318  Automotive Machine Shop I
This course is designed primarily to provide workers capable of performing the duties of an automotive machinist at job entry level. It includes training in cleaning, inspecting, grinding, drilling, honing and reassembling of automotive parts. Emphasis is on safe work habits, pride in workmanship, and accuracy.

MSH 0319  Automotive Machine Shop II
Continuation of MSH 0318.

MSH 0320  Automotive Machine Shop III
Continuation of MSH 0319.

MSH 0321  Marine Outside Machinist I
This course is designed specifically to provide basic indoctrination and skills training for the marine outside machinist in shipyard and related industries. It covers the repair of basic mechanical systems such as bearings, couplings, gears, valves, and pumps. The theory of operation, disassembly, repair and replacement of parts, and reassembly of typical units of shipboard auxiliary machinery are covered.
Also included in training is the use of hand tools, precision measuring instruments, portable power tools, packing, gaskets, lubrication, blueprint reading, and basic layout. The student will learn basic shipboard and shipyard organization and safety procedures relating to the repair of mechanical systems.

MSH 0322  Marine Outside Machinist II
This course is designed specifically to cover the skills required and the responsibilities of the marine outside machinist in the installation and repair of major shipboard mechanical systems such as pressure air systems, distilling plants, steering engines, main propulsion machinery, and associated auxiliary equipment and support systems. The theory of operation, disassembly, repair and replacement of parts, and installation and alignment of both individual units and systems in the machinery normally found aboard ship are covered.

MSH 0323  Marine Outside Machinist III
This course is designed specifically to cover the skills required by the marine outside machinist in the operation and use of heavy power tools used in shipboard repair applications and the basic metallurgy skills required in these repairs. It covers the theory and practical application of machine operations such as the bench grinder, drill press, lathe, and milling machine. It also covers the identification, selection, application, and limitations of various metals in shipboard mechanical systems. Through advance team training on specific projects, it continues development of repair team skills in the areas of removal, disassembly, re-installation, and alignment of major and auxiliary shipboard mechanical equipment. Safety of personnel and protection of equipment will be emphasized.

MSH 0390  EMP Machine Shop
This course is designed to meet the needs of employers and underemployed employees in the machine shop industries.

MTE 0001  Shipyard/Shipboard Orientation
This course is designed to provide an orientation to the marine industry and includes instruction in shipbuilding nomenclature, ship structure, and career opportunities in the field.

MTE 0002  Marine Industrial Safety
This course places emphasis on the safety practices necessary for training in the marine trades and includes instruction in safety procedures, equipment, tools, machinery, environment and protection.

MTE 0003  Introduction to Blueprint Reading for Marine Technicians
This course is designed for job entry level training for the marine trades and includes instruction in symbols, parts, types, views and dimensions of blueprints.

MTE 0004  Basic Mathematics for Marine Technicians
This course is designed to provide basic mathematical skills necessary for training in the marine trades and includes instruction in fundamental skills and industrial applications.

MTE 0010  Boatbuilding
Prerequisite: MTE 0011. This course is designed to help prepare for job entry into the boatbuilding industry and includes instruction in the basic concepts and construction of wooden and fiberglass boats. The course is a combination of classroom and laboratory experience.

MTE 0011  Materials for Boatbuilding and Repair
Prerequisite: MTE 0012. This course is designed to help prepare for job entry into the boatbuilding/repair industry and includes instruction in the wood, fiberglass and fastening materials used in industry. The course is a combination of classroom and laboratory experience.

MTE 0012  Introduction to Boatbuilding
This course is designed to help prepare for job entry into boatbuilding trades and includes instruction in plan reading, tools, and terminology.

MTE 0013  Boat Repairs
Prerequisite: MTE 0010. This course is designed to help prepare for job entry into the boatbuilding industry and includes instruction in basic boat repairs of wooden and fiberglass structures. The course is a combination of classroom and laboratory experience.

MTE 0014  Interior and Exterior Joiner Work in Boatbuilding
Prerequisite: MTE 0010. This course is designed to help prepare for job entry into the boatbuilding industry and includes instruction in planning, mountings, and rough-in techniques for cabins and decks.

MTE 0020  Introduction to Marine Electricity
This course is designed for job entry level training in marine electricity fields and includes instruction in basic DC theory and AC theory. The course includes a combination of classroom and laboratory experience.

MTE 0021  Cable and Equipment Layout and Installation
Prerequisite: MTE 0020. This course is designed for job entry level training in marine electricity fields and includes instruction in the layout and installation of cable aboard ships. This includes a combination of classroom and laboratory experience.

MTE 0022  Motors and Generators for Marine Industry
Prerequisite: MTE 0020. This course is designed for job entry level training in the marine electricity field and includes instruction in the basic operation and repair of motors and generators used in the marine industry. The course includes a combination of classroom and laboratory experience.
MTE 0023 Shipboard Electrical Systems
Prerequisite: MTE 0020. This course is designed for job entry level training in the marine electrical field and includes instruction in the basic maintenance and repair of electrical systems found on small boats. The course includes a combination of classroom and laboratory experience.

MTE 0030 Introduction to Marine Electronics
This course is designed to help prepare for job entry into marine electronics and includes instruction in theory, measuring devices, radio frequency wave propagation, capacitance, inductance, reactance and impedance. The course includes a combination of classroom and laboratory experience.

MTE 0031 Marine Electronic Functions and Systems
Prerequisite: MTE 0030. This course is designed to help prepare for job entry into marine electronics and includes instruction in amplification, rectification, receivers, power supplies, transmitters, antenna systems, and modulation systems. The course is a combination of classroom and laboratory experience.

MTE 0032 Troubleshooting and Maintenance Procedures in Marine Electronics
Prerequisite: MTE 0031. This course is designed to help prepare for job entry into marine electronics and includes instruction in diagram analysis and interpretation, troubleshooting and maintenance procedures.

MTE 0033 Marine Electronic Digital and Computer Fundamentals
This course is designed to help prepare for job entry into marine electronics instruction digital electronic system theory and computer circuits. The course includes a combination of classroom and laboratory experience.

MTE 0040 Troubleshooting Marine Diesel Engine Complaints
Prerequisite: MTE 0041. This course is designed to help prepare for job entry into the marine engine field and includes instruction in operating the simulator and troubleshooting engine complaints. The course is a combination of classroom and laboratory experience.

MTE 0041 Maintaining and Repairing Fuel Systems in Marine Diesel Engines
Prerequisite: MTE 0042. This course is designed to help prepare for job entry into the marine engine field and includes instruction in the repair of fuel systems in common diesel engines. The course is a combination of classroom and laboratory experience.

MTE 0042 Tune-Up of Marine Diesel Engines
Prerequisite: MTE 0043. This course is designed to help prepare for job entry into the marine engine field and includes instruction in Detroit, Cummins and Caterpillar engines. The course is a combination of classroom and laboratory experience.

MTE 0043 Operation and Overhaul of Marine Diesel Engines
This course is designed to help prepare for job entry into the marine engine field and includes instruction in theory of operation, disassembly procedures and overhaul. The course is a combination of classroom and laboratory experience.

MTE 0044 Marine Outboard Motor Familiarization
Prerequisite: MTE 0043. This course is designed to help prepare for job entry into the basic skills required to service, maintain and overhaul outboard motors. The course is a combination of classroom and laboratory experience.

MTE 0050 Introduction to Metal Work
This course is designed for job entry level training in marine pipework and metal fabrication and includes instruction in shop safety, tool and equipment usage, metal characteristics and steel shapes. The course includes a combination of classroom lecture and laboratory experience.

MTE 0051 Bending of Plates and Angles
Prerequisite: MTE 0052. This course is designed for job entry level training in Marine Metal Fabrication and includes instruction in machine and slab bending of metal plates and angles. The course includes a combination of classroom and laboratory experience.

MTE 0052 Basic Triangulation Pattern Development for Fabrication of Metal Work
Prerequisite: MTE 0053. This course is designed for job entry level training in Marine Metal Fabrication and includes instruction in measurement, scale, layout and fabrication using triangulation. The course includes a combination of classroom and laboratory experience.

MTE 0053 Basic Parallel Line Development and Fabrication in Metal Work
Prerequisite: MTE 0054. This course is designed for entry level training in Marine Metal Fabrication and includes instruction in pattern layout and manufacture of piping branches and mitered elbows. The course consists of a combination of classroom and laboratory experience.

MTE 0054 Basic Fabrication of Marine Heating and Air-Conditioning Ducts
Prerequisite: MTE 0050. This course is designed for job entry level training in Marine Metal Fabrication and includes instruction in the development of common seams, layout and fabrication of ducts and flanges. The course includes a combination of classroom lecture and laboratory experience.

MTE 0055 Basic Oxyacetylene and Tack Welding for the Metal Fabricator
This course is designed for job entry level training in Marine Metal Fabrication and includes instruction in the basic arc welding and tack welding required for fabrication. The course includes a combination of classroom and laboratory experience.

MTE 0060 Pattern Layout for Marine Pipefitters
Prerequisite: MTE 0060. This course is designed for job entry level training in marine pipework and includes instruction in blueprint reading, layout and manufacture of piping branches and mitered elbows. The course includes a combination of classroom lecture and laboratory experience.

MTE 0061 Fittings Used in Marine Piping Systems
Prerequisite: MTE 0060. The course is designed for job entry level training in marine pipework and includes instruction in types of pipe measuring and fastening methods for pipe. The course includes a combination of classroom lecture and laboratory experience.
MTE 0062  Basic Valves and Gauges Used in Marine Pipefitting
Prerequisite: MTE 0061. This course is designed for job entry level training in marine pipefitting and provides instruction in the function and installation of valves and gauges commonly used in piping systems. The course includes a combination of classroom lecture and laboratory experience.

MTE 0063  Basic Bending, Testing and Threading Processes in Marine Pipefitting
Prerequisite: MTE 0062. This course is designed for job entry level training in marine pipefitting and includes instruction in hydraulic bending, testing procedures and pipe threading. This course includes a combination of classroom lecture and laboratory experience.

MTE 0064  Basic Welding and Blazing for Marine Pipefitting
Prerequisite: MTE 0063. This course is designed for job entry level training in marine pipefitting and includes instruction in introductory tack welding procedures and sil-braze fittings. The course includes a combination of classroom lecture and laboratory experience.

MTE 0080  Shielded Metal-Arc Welding and Oxyacetylene Equipment for Marine Welding
This course is designed to help prepare for job entry into the marine welding field and includes instruction in shop and welding safety, tool and equipment usage, metal characteristics, steel shapes, electrodes, welding positions, and weld testing. Air arc cutting and gouging and oxyacetylene equipment and use are also covered.

MTE 0081  Blueprint Reading and Welding Symbols for the Marine Welder
This course is designed to help prepare for job entry into the marine welding field and includes instruction on blueprint reading and welding symbols as they relate to the welding and fitting of structural assemblies.

MTE 0082  Shielded Metal-Arc Welding, Flat Position for Marine Welding
Prerequisite: MTE 0080. This course is designed to help prepare for job entry into the marine welding field of shielded metal-arc welding in the flat position using E6010 and E7018, electrodes on mild steel plate. It will also cover oxyacetylene cutting. The course includes a combination of classroom and laboratory experience.

MTE 0083  Oxyacetylene and Air-Arc Cutting and Gouging for Marine Welding
Prerequisite: MTE 0080. This course is designed to help prepare for job entry into the marine welding field and includes instruction in oxyacetylene and air-arc cutting and gouging. This course includes a combination of classroom and laboratory experience.

MTE 0084  Shielded Metal-Arc Welding, Horizontal Position for Marine Welding
Prerequisite: MTE 0082. This course is designed to help prepare for job entry into the marine welding field and provides instruction in shielded metal-arc welding in the horizontal position using E6010 electrodes on mild steel plate. It will also cover oxyacetylene cutting. The course includes a combination of classroom and laboratory experience.

MTE 0085  Shielded Metal-Arc Welding, Vertical Position in Marine Welding
Prerequisite: MTE 0084. This course is designed to help prepare for job entry into the marine welding field and includes instruction in shielded metal-arc welding in the vertical position using E6010 and E7018 electrodes on mild steel plate. It will also cover oxyacetylene cutting. The course includes a combination of classroom and laboratory experience.

MTE 0086  Shielded Metal-Arc Welding, Overhead Position in Marine Welding
Prerequisite: MTE 0085. This course is designed to help prepare for job entry into the marine welding field and includes instruction in shielded metal-arc welding in the overhead position using E6010 and E7018 electrodes on mild steel plate. It will also cover oxyacetylene cutting. The course includes a combination of classroom and laboratory experience.

MTY 0390  EMP Industrial Mechanics
This course is designed to meet the needs of employers and underemployed employees in the industrial mechanics field.

MTY 0395  EMP Hydraulics
This course is designed to meet the needs of employers and underemployed employees in the hydraulics industry.

NUA 0310  Nurse Assistant
This course is designed to prepare a non-professional worker with the finger tip skills to perform selected activities under the direct supervision of the registered professional nurse. This course requires 240 hours which is taught within an eight-week period.

NUR 0512  Nursing Seminar
This seminar is designed to upgrade the skills of the Registered and/or Licensed Practical Nurse. The student will be introduced to current nursing trends and problems and will participate in the development of solutions in conjunction with instructors.

ORH 0010  Ornamental Landscaping
A course designed to upgrade the skills of landscapers, gardeners, and nursery workers, enabling them to keep abreast of the latest developments and techniques in their profession. The course also provides refresher training for Certified Critics and for reinstatement of expired certificates.

PAD 0010  Grant Writing and Management
This course is a workshop laboratory course designed to give participants a comprehensive understanding of the wide variety of funding sources available to community-based private non-profit organizations, finely tuned capabilities in the skills and tools of grant development and management, and actual guided experience in the development of one or more grant proposals.

PCL 0390  EMP Basic Pest Control
This course is designed to meet the needs of employers and underemployed employees in the pest control industry.

PDE 0317  Jacksonville Drywall Decorators and Painters Apprenticeship
This course covers the technical aspects of painting, paper hanging and drywall finishing. The painting section covers methods of application of types of paint, surface preparation and material and equipment. The paper hanging section covers materials and surface preparations. The drywall section covers tools and methods of application.
PPF 0309  Plumbing and Pipefitting I
This course is designed specifically for job entry training in the assembly and installation of air, gas, water and waste disposal systems, including the cutting, reaming, and threading of pipe, caulking and wiping joints, and the installation of gas, water, and sanitary fixtures and equipment with supports, hangers, or foundations.

PPF 0310  Plumbing and Pipefitting II
Continuation of PPF 0309.

PPF 0311  Plumbing and Pipefitting III
Continuation of PPF 0310.

PPF 0315  Plumbing and Pipefitting
This course is designed primarily for apprenticeship instruction and its contents include training in the assembly and installation of air, gas, water and waste disposal systems, including the cutting, reaming, and threading of pipe, caulking and wiping joints, and the installation of gas, water and sanitary fixtures and equipment with their supports, hangers, or foundations.

PPF 0390  EMP Plumbing
This course is designed to meet the needs of employers and underemployed employees in the plumbing industry.

PPF 0395  EMP Pipefitting
This course is designed to meet the needs of employers and underemployed employees in the pipefitting industry.

PRN 0310  Practical Nursing
This course of study is designed to prepare individuals within 12 months to share in giving direct care to patients in the hospital, nursing home, or home. A minimum of 1,350 hours is required to complete the program. Classes are admitted twice annually. A high school education and an acceptable score on the aptitude test are required. The program is accredited by the State Department of Education and the Florida State Board of Nursing. Persons who successfully complete the course are eligible to write the State Board Test Pool Examination to qualify for licensure to practice as a Licensed Practical Nurse and to use the title of LPN.

PTR 0010  Career Development
This course helps students understand their educational and occupational strengths through testing and will teach specific skills, including job search techniques, job interview techniques, salary negotiation, resume writing, to those seeking to re-enter the job market and to those seeking to upgrade present positions. Designed to help participants discover and focus on their hidden skills.

PTR 0015  Career Planning for Handicapped Students
This course is designed to assist handicapped students by enhancing their career planning skills and placement into FJC course(s) and/or competitive employment. The two-week course (45 contact hours) is offered all year. The three phases of the course include: Orientation and Career Exploration, Testing and Placement, Testing and Placement activities.

PTR 0020  Office Support Services Seminar
This seminar is designed as supplemental instruction for persons already employed in the field. It presents a series of instructional activities related to selected topics offered in response to requests by business organizations or agencies. Curriculum program and format will vary according to the training needs of employers. Each seminar curriculum will be directed toward improving the office duties and responsibilities of clerical, secretarial, and other office support personnel.

PTY 0312  Photography and Photo-Finishing
This course is designed for persons already employed in the field, or in a related field, for supplementary instruction. The student will receive training in the making of photographic negatives from which prints can be developed, using studio-type and other cameras and training in the washing, drying, trimming, mounting of photographic prints, retouching prints and covering imperfections and in surface finishing of prints.

PUR 0010  Public Relations: The Art of Positive Communications
This course stresses communication and public relations skills which will provide those individuals associated with the field of public relations the opportunity to upgrade their skills. These individuals and community action groups will then be able to promote issues, programs, or organizations. The success of a public relations program depends upon an understanding of the communication process and the wise application of the proper tools. Topics covered include working with the media, marketing, writing and layout, resource development-volunteers and fund raising, and developing a promotional campaign. Each participant will be encouraged to learn by doing and sharing.

RES 0211  Real Estate Principles and Practices
This course is designed specifically as occupational preparatory training and is intended to orient students with the knowledge and understanding of legal and ethical principles necessary for the real estate profession to continue to elevate itself for the protection of the public and to enable the real estate practitioner to enjoy the privileges due to the practitioner by the Florida Real Estate Commission. This course, when successfully completed, fills the educational requirement enabling an individual to apply for the real estate salesman's state examination.

ROO 0317  Apprenticeship Residential and Industrial Roofing
This course is designed to meet the needs of contractors and apprentices in the residential and industrial roofing industry.

RTE 0010  Basic Radiologic Technology
This course is designed to include principles of radiologic technology with particular emphasis in the areas of radiation protection and radiation biologic effects. It is intended for persons who are currently or previously employed as X-ray technicians, subject to new licensure requirements in Chapter 10D-74, Florida Administrative Code.

SAM 0010  Supervisory Training
This course is designed as supplementary instruction for persons already employed in a related field. The course consists of planned learning experiences which include a study of the basic principles of supervision and how to apply these principles in practice. It covers supervision, human relations, job advancement, and the development of other supervisory skills.

SEM 0010  Home Economics Seminar
Home Economics Supplementary Instruction Seminars are a series of seminars designed as supplemental instruction for persons previously and/or currently employed in clothing/textile/interior design or food-related operations which will be offered in response to industry and/or community demand. The time and meeting places of the seminars will vary according to the needs of the participants.
SEO 0210  Basic Security Officers Training Course  
This course is designed specifically as supplementary training and covers a variety of areas considered to be directly related to security work. Areas such as firearms, first aid, arrest techniques, and search and seizure are discussed.

SHM 0309  Sheet Metal I  
This course is designed specifically for job entry training in fabricating, assembling, altering, repairing, and installing sheet metal articles and equipment.

SHM 0310  Sheet Metal II  
Continuation of SHM 0309.

SHM 0311  Sheet Metal III  
Continuation of SHM 0310.

SHM 0315  Sheet Metal  
This course is designed primarily for apprenticeship instruction and its contents include training in fabricating, assembling, altering, repairing, and installing sheet metal articles and equipment.

SHM 0390  EMP Sheet Metal  
This course is designed to meet the needs of employers and underemployed employees in the sheet metal industry.

STO 0310  Surgical Technician  
This course of study is designed to prepare students in 10 months to function as a member of the surgical team in a hospital operating room under the direct and continuous supervision of qualified professional nurses and surgeons. The course consists of theory and practice in the application and principles underlying the care of patients in the operating room. A certificate will be awarded upon completion of the course. Particular emphasis is placed upon the skills involved in scrubbing and circulating during surgical procedures, and in the preparation and maintenance of sterilized and unsterilized supplies.

STS 0020  Medical Terminology  
Medical Terminology is designed as supplementary instruction for persons already employed in a related field and is a study of the development of a medical vocabulary commonly used in physicians' offices. Emphasis is given to physiologic and anatomic terms and organic systems.

STS 0110  Basic Business Shorthand  
This course is designed specifically as supplementary training for persons employed in related fields. It is an introductory course in principles and skills of shorthand designed to meet the minimum standards of performance in shorthand and transcription comparable to those in local business offices.

STS 0112  Intermediate Shorthand and Transcription  
This course is designed for persons already employed in a related field, as supplementary instruction. The course will require the student to review the principles of Gregg shorthand; to develop further the student's ability to spell and punctuate; to develop command of the mechanics of English; to handle the problems of office dictation, and to teach efficient transcription techniques.

STS 0113  Advanced Shorthand and Transcription  
This course is designed as supplementary instruction to integrate shorthand, English, and typewriting skills and to develop the student's ability in producing transcripts.

STS 0116  Beginning Shorthand I  
High School Cr. 1/2  
Prerequisite or corequisite: TYG 0120. This is a beginning course in the principles of Gregg shorthand. Emphasis is placed on theory and basic dictation and transcription practice.

STS 0117  Beginning Shorthand II  
High School Cr. 1/2  
Prerequisite: STS 0116 or equivalent. This course is a continuation of Beginning Shorthand I with increased emphasis on dictation and transcription.

STS 0118  Advanced Shorthand and Transcription I  
High School Cr. 1/2  
Prerequisite: STS 0117 or equivalent. This course is designed to review Gregg shorthand theory and to develop the ability to transcribe rapidly and accurately. Emphasis is placed on mastery of English mechanics also.

STS 0119  Advanced Shorthand and Transcription II  
High School Cr. 1/2  
Prerequisite: STS 0118. This course covers accelerated dictation and transcription with emphasis on the finished product.

STS 0135  CPS Review Course  
This course designed as supplementary instruction to prepare students to take the examination for Certified Professional Secretaries. A two-term course, it will cover Environmental Relationships; Business and Public Policy; Economics of Management; Financial Analysis and the Mathematics of Business; Communications and Decision Making; and Office Procedures. Time segments for each of the areas will be established as needed within the terms.

STS 0140  Word Processing – Magnetic Typewriter Keyboard  
This course includes supplementary instruction in the function and use of the magnetic typewriter keyboard in the development of basic business documents. Students will learn to operate the automated equipment which includes record, playback, correct and revise documents. Instruction in the logging and filing systems for the automated equipment will be included.

STS 0142  Word Processing – Memory Typewriter  
High School Cr. 1/2  
This course is designed to integrate the typewriter keyboard skills. The student will be trained in the operation and use of the memory typewriter together with filing and logging systems for stored typewritten information.

STS 0309  Office Occupations I  
This course is intended for the student with little or no previous training in the clerical or secretarial fields. In this first course the student is introduced to Typewriting, Business English, Office Machines, Office Procedures, Bookkeeping, and Business Mathematics.

STS 0310  Office Occupations II  
In this course the student continues learning and progressing in the clerical and secretarial fields introduced in STS 0309.

STS 0311  Office Occupations III  
This course is a continuation of the series in which the student reaches job entry levels in Typewriting, Business English, Office Procedures, Bookkeeping, and Business Mathematics.

TYG 0110  Basic Typewriting  
This course in typewriting for business use is designed specifically as occupational preparatory training to assist persons to acquire mastery of the keyboard and to develop the ability to type personal and business letters accurately and in good form.
TYG 0112 Advanced Typewriting
This course is designed as supplementary instruction to develop sufficient skills, techniques, and knowledge in the use of the typewriter for the student to work in a business office, in a clerical or stenographic position.

TYG 0120 Basic Typewriting I
High School Cr. 1/2
This course is designed to assist students in acquiring mastery of the keyboard for job entry training and for personal use. Basic typing skills and applications include centering, tabulating, personal and business communications, themes, outlines, report manuscripts, and inventory measurements.

TYG 0122 Basic Typewriting II
High School Cr. 1/2
Prerequisite: TYG 0120. This course is designed to continue improving basic typing skills. Applications included are personal and business letters, tabulations, manuscripts and reports.

TYG 0124 Advanced Typewriting I
High School Cr. 1/2
Prerequisite: TYG 0122. A continuation of basic skills in speed and accuracy with emphasis on production typing of special tables and columnar reports, business letters and envelopes, special correspondence, and business forms, reports, and manuscripts.

TYG 0126 Advanced Typewriting II
High School Cr. 1/2
Prerequisite: TYG 0124. A continuation of production typing with emphasis on mailable business correspondence and reports as used in a typical office situation.

WEL 0309 Welding I
This course is designed specifically for job entry training in fusing metal parts by means of oxyacetylene torch or electric welding apparatus and welding rods to fabricate metal articles or to repair damaged metal objects.

WEL 0310 Welding II
Continuation of WEL 0309.

WEL 0311 Welding III
Continuation of WEL 0310.

WEL 0390 EMP Welding
This course is designed to meet the needs of employers and underemployed employees in the welding industry.
Adult and Continuing Education Courses

AAC 0001  Bookkeeping  High School Cr. 1
An introductory course of basic principles, concepts, and knowledge required for practical bookkeeping in everyday living.

AIO 0016  Aerospace Education  High School Cr. 1
Aerospace Education is a course designed to acquaint students with the worlds of air and space. It will provide them with the basic knowledge, skills, and attitudes about aerospace that will enable them to live and function in tomorrow's society. The course will relate social and economic problems with aerospace technology and show the potential of future development in the field.

ANA 0001  Anatomy  High School Cr. 1
Introduction to the organization of the structure and functional characteristics of man. A study of the morphological changes which occur from a cellular and subcellular level to the whole organism.

ART 0001  Art Appreciation  High School Cr. 1
A study of the art of significant periods, its contribution to civilization, aesthetic and human values.

ART 0003  Fundamentals of Art  High School Cr. 1
A study of the fundamentals of drawing and painting, concepts of drawing principles and composition, and a study of techniques.

ART 0004  Advanced Art  High School Cr. 1
A course to further develop the student's understanding of the concepts and techniques of drawing and painting and to provide continued opportunity for practicing these skills. Prerequisite: Fundamentals of Art or its equivalent.

ART 0005  Oil Painting  High School Cr. 1
Techniques of oil painting, color theory, and creativity. Students are required to purchase all materials needed for the course.

BDP 0100  Introduction to the Computer  High School Cr. 1/2
The purpose of this course is to provide an overview of computers in today's world: what they are, what they do, how they work, the hardware involved, the necessary components of an "information system," the need for accuracy and controls, the most common languages, the most common business applications, and an understanding of the basic terminology.

BIO 0001  General Biology  High School Cr. 1
A study of the origin, development, structure, functions, and distribution of plants and animal life.

BIO 0002  Health Science  High School Cr. 1
This course is a study of the human body, including the skeletal system, muscular system, digestive system, circulatory system, respiratory system, nervous system, endocrine system, urinary system, and the reproductive system. Also included in this course are safety and first aid.

BIO 0005  General Laboratory Biology  High School Cr. 1
This course is designed to give students an introduction to the origin, development, structure, function and distribution of living things. An integral and required part of this course will be the laboratory section, which will provide "hands on" experiences in familiarizing students with organisms, processes and principles, as well as providing activities that will acquaint them with scientific procedures and equipment.

BLC 0001  Afro-American History  High School Cr. 1
This course is designed to provide evidence that the culture of Afro-Amercians is one in which all Americans can take pride. It is hoped that black students will be aided in their development of self-worth and dignity.

BUS 0001  General Business  High School Cr. 1
A non-vocational course intended to provide the adult student with a basic understanding of general business practices as they relate and have application to the everyday business affairs of the lay citizen.

CHE 0001  Chemistry  High School Cr. 1
Course covers the areas of elements and compounds, oxygen and hydrogen, water and solutions, carbon and its oxides, and acids, bases and salts.

DRA 0001  Drama  High School Cr. 1
Planning and execution of production functions; scene construction and painting, props, costuming, lighting and other full technical responsibilities.

DRT 0101  General Shop, Drafting 1  High School Cr. 1
An introduction to the broad field of drafting as used in everyday living, architecture, engineering, and construction, for general technical use. The laboratory work provides opportunities for students to learn to make and use drawings. It includes the uses of drawings in industries and occupations such as sheet metal, machine shop, plumbing, electricity and electronics.

ECY 0001  Environmental Control Awareness  High School Cr. 1
This course is designed to give the student insight into the causes, problems and solutions of air, water, and noise pollution. The overall theme of the course is based on making the student aware of the delicate ecological balance which pollution control attempts to maintain. Upon successful completion of this course, the student should have sufficient depth in the area of environmental control to adequately instruct others in the basis of environmental control.

ECY 0003  Nature Study and Conservation  High School Cr. 1
The study of nature through personal exploration of remaining wilderness tracts. Students will learn backpacking and wilderness camping techniques vital to personal safety and will participate in field trips designed to acquaint the student with problems concerning our dwindling natural resources.

EFL 0001  English for Foreign Born  High School Cr. 1
English for the alien is a class designed for students who have difficulty with the English language. This course is especially designed for new arrivals in the United States.
ENC 0007 Writing Review and Remediation for CLAST
This course is designed to meet the needs of Associate in Arts and Associate in Science degree students to further their mastery of the writing skills as related to the College Level Academic Skills Test (CLAST).

ENG 0001 English Grammar High School Cr. 1
This course is designed to meet the needs of high school students and adults to further their mastery of basic, fundamental concepts of English grammar.

ENG 0002 Reading Techniques High School Cr. 1
This is a developmental course which emphasizes basic reading skills and comprehension.

ENG 0003 Speed Reading High School Cr. 1
An advanced course designed to increase reading speed and further improve reading skills and comprehension.

ENG 0004 Creative Writing High School Cr. 1
This course is designed to encourage students to express their thoughts and to improve self-confidence in the use of language. Students enrolling must possess a certain skill with language and grammar and must have a desire to write. Knowledge will be gained in methods of writing both fiction and non-fiction.

ENG 0005 How to Succeed in College High School Cr. 1
This course is designed for the immediate high school graduate to assist them in making an easier adjustment to the college environment. The course is offered in two parts: speed reading and college guidance.

ENG 0006 English I High School Cr. 1
English 2200, a programmed course in grammar and usage, is designed to introduce students to grammar, sentence building, correct usage, and punctuation. It is further designed to provide a quick recapitulation of the elements of language.

ENG 0007 English II High School Cr. 1
English 2600 provides a programmed approach to mid-level high school grammar and usage. It offers one-step-at-a-time learning with written responses which require both thinking and recall. The accompanying textbook provides frequent opportunity for students to evaluate their progress and to coordinate the various segments of instructional material covered. An expanded study is provided of the basic parts of speech, the role of modifiers, effective sentence structure, subject-verb agreement, all phases of punctuation, and related grammatical techniques.

ENG 0008 English III High School Cr. 1
English 3200 provides a programmed approach to an in-depth study in grammar and usage. It consists of more than 3,200 very carefully arranged frames which enable the student to reason their way through one-step-at-a-time. Strictly senior level, English 3200 requires a good prior command of the basic grammatical processes. Sentence patterns — simple, compound, and complex — are explained along with other grammatical techniques leading to smooth sentence structure. Solutions are offered to the more advanced problems often related to effective use of the parts of speech. Skills with graphics are covered in a manner preparatory to college entrance.

ENG 0010 Developmental Writing High School Cr. 1
The purpose of this course is to help the student develop skill in expressing thoughts clearly and concisely. This is primarily a writing course, requiring that the student already have a substantial background in grammar. A grade average of C in English 2600 (or its equivalent) is a prerequisite.

ENG 0011 Grammar/Composition High School Cr. 1
This course is designed to provide the student with specialized training in writing. Learning experiences are built on the foundation of standard English grammar, the framework of communication. The principles of grammar presented in the course are functional. Numerous practice exercises are provided within each unit so that the students will be able to master the principles as they study. Principles of spelling, punctuation, capitalization, abbreviation, and number style are taught as tools to be used by the writer in order to guide readers to correct, clear interpretations of the message.

ENG 0014 Communication Skills High School Cr. 1
This course will provide preparatory and remedial assistance to adult high school students who have not passed the State Student Assessment Test, Part II (SSAT II). It is comprised of eight (8) reading skills modules and three (3) writing skills modules, one for each communication skill defined by State Board Regulations. Students who are preparing to take the test for the first time will complete all eleven modules; those who need remediation will complete only the modules corresponding to those skills in which they are deficient.

ENG 0015 Basic Reading Techniques I High School Cr. 1
A diagnostic, prescriptive course in reading designed to begin at the student's level in rate and comprehension. Phoneme-grapheme (sound-symbol) relationships, words in context, structural analysis, sight words, and dictionary pronunciation and meaning are stressed in building vocabulary. Detecting sequence, following directions, and recognizing topics and main ideas are studied in building comprehension. Instruction is conducted individually and in groups. A wide variety of machines and materials are available to achieve a grade level of 8.5 in reading.

ENG 0017 Developmental Reading Techniques II High School Cr. 1
A diagnostic, prescriptive course designed to develop the student's vocabulary and comprehension. Efforts are concentrated on developing reading skills essential for generalized high school materials. Reference sources, the use of the library, the SQ3R study method, and outlining, are stressed for use in the content areas. Group and individual instruction, and a variety of machines and materials are available to achieve a grade level of 10.5 in reading. Prerequisite: Reading Techniques I (Basic) or equivalent grade level of 8.5 in reading.

ENG 0019 Advanced Reading Techniques III High School Cr. 1
A diagnostic and prescriptive course designed to provide the student with an opportunity to increase their power in critical reading, technical vocabulary and in rate of efficiency. Memory improvement, skimming and scanning, and test-taking techniques are stressed. Group and individualized instruction and a variety of machines and materials are available to achieve a grade level of 12.5 in reading. Prerequisites: Developmental Reading Techniques II or equivalent grade level of 10.5 in reading.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRE 0001</td>
<td>French</td>
<td>This course is adapted to the needs and interests of adults who wish to acquire a speaking and oral comprehension ability in introductory French.</td>
</tr>
<tr>
<td>GEO 0001</td>
<td>Geography</td>
<td>A general course in geography which includes a study of the physical, economic, political, and cultural aspects of important geographic areas and people, and their influence on world conditions and problems.</td>
</tr>
<tr>
<td>GER 0001</td>
<td>German</td>
<td>This course is adapted to the needs and interests of adults who wish to acquire a speaking and oral comprehension ability in introductory German.</td>
</tr>
<tr>
<td>GRA 0101</td>
<td>General Shop Graphics</td>
<td>This course is an introduction to the field of graphics involving various media and forms and provides a non-vocational approach to the study of printing, drawing, and related areas.</td>
</tr>
<tr>
<td>GRE 0005</td>
<td>Modern Spoken Greek Language</td>
<td>This course is adapted to the needs and interest of students who wish to acquire a speaking and oral comprehensive ability in modern Greek. One will learn the Greek alphabet, learn to speak short sentences, and learn to read and write a Greek letter.</td>
</tr>
<tr>
<td>HEB 0010</td>
<td>Hebrew</td>
<td>This course consists of learning basic Hebrew grammar, developing a 250-word vocabulary and recognizing Hebrew characters in print and script. One will also learn to read Hebrew and translate simple sentences from Hebrew to English and from English to Hebrew.</td>
</tr>
<tr>
<td>HIS 0002</td>
<td>Citizenship Education for</td>
<td>This course is designed to acquaint prospective citizens with United States history, the Constitution and its historic background, and the organization of local, state, and federal governments; to promote understanding and appreciation for ideals, privileges and responsibilities of democratic citizenship; and to prepare individuals for the examination administered by immigration and naturalization authorities.</td>
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<tr>
<td>HEB 0001</td>
<td>American History</td>
<td>Emphasis is placed on political, economic, and social development of the United States from colonization to the present.</td>
</tr>
<tr>
<td>HEB 0002</td>
<td>American History</td>
<td>Emphasis is placed on political, economic, and social development of the United States from colonization to present.</td>
</tr>
<tr>
<td>HUM 0001</td>
<td>Introduction to the</td>
<td>An inter-disciplinary introduction to the creative arts. Course will examine in a general way the fundamental elements of the visual arts, music, letters, films, and electronic media, and the way humanists have used these in expressing themselves.</td>
</tr>
<tr>
<td>IDS 0001</td>
<td>Adult Basic Education</td>
<td>This course provides instruction in the elementary skills of reading, writing, arithmetic, spelling, social studies, health, science, and art for adults who desire a foundation of study at the secondary level.</td>
</tr>
<tr>
<td>IDS 0003</td>
<td>General Education</td>
<td>Instruction in general education subjects, includes elementary and secondary levels. This offering is designed to accommodate the needs of a class which consists in part of individuals who are on the high school level.</td>
</tr>
<tr>
<td>IDS 0004</td>
<td>Academic Skills Review</td>
<td>Intensive review is given to mathematics, reading, and writing for students who require assistance in meeting the entry level competencies for the Developmental Education Link Through Achievement (DELA) Program College Credit Track. An individual educational plan is developed for each student in the subject(s) identified in order to allow each student to move ahead as rapidly as possible.</td>
</tr>
<tr>
<td>IDS 0005</td>
<td>High School Review</td>
<td>An intensive review of the four major academic areas of English, mathematics, social studies, and science on the secondary level in preparation for GED examinations that lead to the high school equivalency diploma.</td>
</tr>
<tr>
<td>IDS 0007</td>
<td>GED Testing Skills Seminar</td>
<td>The GED Testing Skills Seminar will provide critical, to-the-point information about the High School Equivalency Examination to persons who have enrolled to take the test at the next available date. The professor will not attempt to teach content in this seminar, but rather the goal will be to familiarize students with the general format of the test, and with what types of questions will be asked. During the course of the seminar, students will be given the GED test philosophy, statistics regarding the exam, and actual brief testing experience, guidelines for successful test-taking in general, and an opportunity to discuss any questions they may have about the exam.</td>
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<tr>
<td>ITA 0001</td>
<td>Italian</td>
<td>This course consists of pronunciation, elements of grammar, simple conversation exercises, reading, and composition. Visual and auditory aids are employed.</td>
</tr>
<tr>
<td>LAT 0001</td>
<td>Latin</td>
<td>This course is designed to develop a basic vocabulary, proper pronunciation, and correct grammatical patterns.</td>
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<tr>
<td>LAW 0001</td>
<td>Law for the Lay Person</td>
<td>The purpose of this course is to acquaint the lay person with the various phases of law that affect everyday life, regardless of occupation or profession. Included are topics such as contracts, sales, business law, personal property transaction, real property, domestic relations, the courts and law, negotiable instruments, agencies, wills and other aspects of law needed to assist the lay person.</td>
</tr>
<tr>
<td>LIS 0001</td>
<td>Library Science</td>
<td>This course is designed to introduce the students to all of the resources of the media center, both printed and non-printed, which will aid them in becoming effective users of any library.</td>
</tr>
<tr>
<td>LIT 0001</td>
<td>Literature</td>
<td>Reading and discussion of literature by English authors from the Anglo-Saxon period through the modern age.</td>
</tr>
<tr>
<td>LIT 0002</td>
<td>Literature – Great Books</td>
<td>This course is designed to study distinctive characteristics of Hebraic and Christian literature and make comparisons</td>
</tr>
</tbody>
</table>
with other well-known literary works by world authors. Experiences are enlarged through the recognition of allusions, or Biblical themes, or word origins and vocabulary study, and of literary structures. Unusual sentence structure and punctuation are noted. Provisions for individual expression through class discussions, parallel readings, and creative written assignments make this course both interesting and educational.

LIT 0003 Literature – Great Books High School Cr. 1
This course is designed to study distinctive characteristics of Hebraic and Christian literature and make comparisons with other well-known literary works by world authors. Experiences are enlarged through the recognition of allusions, or Biblical themes, or word origins and vocabulary study, and of literary structures. Unusual sentence structure and punctuation are noted. Provisions for individual expression through class discussions, parallel readings, and creative written assignments make this course both interesting and educational.

LIT 0005 Bible History – Bible High School Cr. 1
This course is designed to meet the needs of adult students desiring instruction in biblical history, literary form and culture and their influence and pertinence to and upon modern culture and society.

LIT 0007 World Poetry High School Cr. 1
The course will survey the major poets of Greece, Rome, France, and Germany, with brief studies of other European poetry. It will include a workshop for members of the class who write poetry.

LIT 0008 World Literature High School Cr. 1
A course designed for more mature students. It contains some of every type of literature. Authors are contemporary and from numerous countries. The course has unusual features: tests are divided into cognitive and affective, and definitely scheduled conferences with the student are an integral part of the course. It is also individualized to fit into the adult program.

LIT 0009 Understanding Literature High School Cr. 1
This is a programmed course well suited to the individualized instruction of the adult program. It is based on generalized themes which are common to all literature, such as feeling, character, imagery, and style. In keeping with its programmed nature, the material is divided into manageable parts.

LIT 0010 Literature I High School Cr. 1/2
This course is arranged topically. Authors are contemporary Americans and all types of literature are included. Although none of them is considered a prerequisite for another, this course is regarded as the first in the "Adventures" series.

LIT 0011 Literature II High School Cr. 1/2
This course is an anthology of American literature. There are two major emphases. One is topical. The other concentrates on selected authors.

LIT 0012 Literature III High School Cr. 1/2
This florilegium is not limited by time, place, or type. It is an eclectic selection of writers from the ancient to the present and from many countries. Included are short stories, novels, plays, poems and non-fiction. Readings are on a more mature level than Literature II.

LIT 0014 Literature I High School Cr. 1
This course is arranged topically. Authors are contemporary Americans and all types of literature are included. Although none of them is considered a prerequisite for another, this course is regarded as the first in the "Adventures" series. A student will be required to read a selected novel and to submit a research paper.

LIT 0015 Literature II High School Cr. 1
This course is an anthology of American literature. There are two major emphases. One is topical. The other concentrates on selected authors. A student will be required to read a selected novel and to submit a research paper.

LIT 0016 Literature III High School Cr. 1
This florilegium is not limited by time, place or type. It is an eclectic selection of writers from the ancient to the present and from many countries. Included are short stories, novels, plays, poems and non-fiction. Readings are on a more mature level than Literature II. A student will be required to submit a research paper.

MAT 0001 Mathematics, General High School Cr. 1
A course designed to satisfy the needs of individuals whose interests require a knowledge of modern general mathematical skills and concepts.

MAT 0002 Business Mathematics High School Cr. 1
This course covers problems involving proprietorship, sales, profits and losses, payroll, simple interest and real estate, leading to work with integers, fractions and decimals commonly used in business, insurance, bonds, compound interest, and corporation and financial statements.

MAT 0003 Modern Mathematics High School Cr. 1
This course is designed primarily for those who wish to have an orientation to an understanding of the basic concepts and terminology of the new mathematics program being taught in the elementary and junior high schools in Florida.

MAT 0004 Algebra I High School Cr. 1
An introduction to algebra with emphasis on fundamentals, the solution of equations, and the application of equations to everyday problems.

MAT 0005 Algebra II High School Cr. 1
Continuation of Algebra I with emphasis on fractions, fractional equations, quadratic equations, elementary trigonometry, ratio and proportion, and radicals with problems using these.

MAT 0006 Trigonometry High School Cr. 1
Emphasis is placed on vectors, complex numbers, circular functions, inverse functions and the proof of trigonometric identities. The use of logarithms and computations, and the solution of triangles are also included in the course.

MAT 0007 Plane Geometry High School Cr. 1
A course dealing with geometric figures in a plane surface in which construction and deductive reasoning with triangles, perpendicular and parallel lines, polygons and the circles are emphasized. Special emphasis is placed on congruent triangles. This course is useful especially in the fields of mechanical drawing, design, surveying, engineering, aviation, navigation, and the physical sciences.
MAT 0008  Basic Mathematics  High School Cr. 1
A course designed to insure competency in computation with integers, fractions, and decimals. Practical application of percentage and measurements, including the metric system, is stressed.

MAT 0009  Consumer Mathematics  High School Cr. 1
This course is designed to cover the wide range of consumer problems such as banking, insurance, bonds, stocks, home ownership and installment buying. Also included are problems involving proprietorship, payrolls, sales, discounts, simple interest, compound interest, financial statements and profits or losses.

MAT 0010  Introduction to the Metric System  High School Cr. 1/2
This course is designed to acquaint the student with the use of the International System of Units and satisfy the needs of adults for metrication training.

MAT 0011  Mathematics Skills
This course will provide preparatory and remedial assistance to adult high school students who have not passed the State Student Assessment Test, Part II (SSAT II). It is comprised of thirteen (13) modules, one for each mathematical skill defined by State Board Regulations. Students who are preparing to take the test for the first time will complete all thirteen modules; those who need remediation will complete only the modules corresponding to those skills in which they are deficient.

MAT 0012  Mathematics Review and Remediation for (CLAST)
This course is designed to meet the needs of Associate in Arts and Associate in Science degree students to further their mastery of the computation skills as related to the College Level Academic Skills Test (CLAST).

MEW 0001  General Shop Metals  High School Cr. 1
Designed for both beginning and advanced students. Incorporates all machine shop phases including bench and sheet metals, forging, foundry, and welding.

MUS 0001  Basic Music Theory  High School Cr. 1
A course designed for the beginning music student. Includes work with elementary music terminology, notation, intervals, scales, chords, rhythm, sight singing, dictation, and keyboard skills.

MUS 0003  Instrumental Music  High School Cr. 1
A course offered to meet the needs of individuals who wish to learn fundamentals of playing various musical instruments and who wish to practice in group instrumental music activities.

MUS 0005  Community Orchestra  High School Cr. 1
The Community Orchestra provides instrumentalists in the college and community an opportunity to perform works representative of a broad spectrum of orchestral literature, to refine techniques of ensemble playing, and present concerts each term. Membership is by permission of the director and/or audition; participation by string majors is required.

MUS 0007  Choral Music  High School Cr. 1
A course in both individual and group singing, with emphasis on group vocal experience that may be useful to the individual who participates in community musical activities.

MUY 0001  Music Appreciation  High School Cr. 1
This course will teach the student to listen creatively and will acquaint the student with form and various styles in classical music.

ORI 0001  The World of Work  High School Cr. 1
This course is designed to assist students in acquiring an intelligent and panoramic view of the world of work.

PHS 0001  General Science  High School Cr. 1
An introductory survey course designed to acquaint the student with both the physical and biological sciences.

PHS 0003  Physical Science  High School Cr. 1
A course normally given for high school credit, designed to acquaint the individual with various aspects of the physical sciences. It includes elements of physics, chemistry, geology, astrology, meteorology and other selected physical science topics.

PHS 0004  Earth Science  High School Cr. 1
This course is a study of the planet earth, the earth's changing surface, and the earth's atmosphere.

POS 0001  American Government  High School Cr. 1
This course includes a study of such topics as the constitution; legislative, executive and judicial branches, and functions of national, state, and local government; finance and taxation; national defense; health, education and welfare; elections; citizenship.

POS 0002  Civics  High School Cr. 1/2
This course deals with the structure and function of government at the local, state, and national levels. Seven units must be completed satisfactorily for one-half credit.

POS 0003  Civics  High School Cr. 1
This course deals with the structure and function of government at the local, state, and national levels. Ten units must be completed satisfactorily for one credit.

POS 0004  Americanism Vs. Communism  High School Cr. 1/2

POS 0005  Americanism Vs. Communism  High School Cr. 1
An analysis of American Government, democratic principles and the basis of communism. Each student must give an oral report in class and turn in one written report on a topic approved by the professor.

PSY 0001  Psychology  High School Cr. 1
This is a basic study of human behavior. Consideration is given to the family and its place in society, psychology and human relations, coping with the problems of a changing society and cultural environment, understanding the interests, aptitudes and desires of individuals and matters of personal and group adjustment.

REA 0001  Reading Review and Remediation for CLAST
This course is designed to meet the needs of Associate in Arts and Associate in Science degree students to further their mastery of the reading skills as related to the College Level Academic Skills Test (CLAST).
SLD 0001  Sign Language  High School Cr. 1
This course is designed to teach individuals to communicate with the deaf through the use of finger positions. Another common name for this is finger spelling.

SOC 0001  Sociology  High School Cr. 1
This course includes the study of cultural influences on our society, the forms, institutions, and functions of human groups, and the various types of individual and group relationships.

SPA 0001  Spanish I  High School Cr. 1
Elements of grammar, pronunciation, elementary conversation, and reading of simple Spanish texts.

SPA 0002  Spanish II  High School Cr. 1
Review of grammar, with conversation and composition, and reading of Spanish texts.

SPE 0001  Public Speaking  High School Cr. 1
This course includes the fundamentals of effective speaking practice in organization of materials and delivery, development of voice, vocabulary, diction, and poise.

STD 0010  Orientation to the Professions  High School Cr. 1
This course is designed to give young adults information and guidance about various professions in which they have shown an interest. The course will be taught by active or retired practitioners in various professions (law, medicine, business, fine arts, etc.) The course will also include research into the professions, aptitude and interest testing, field trips, and exploration of self and of the professional working world.

STS 0001  Notetaking/Speedwriting  High School Cr. 1
This course provides opportunities for learning to write with speed in as short a period of time as possible. It aims primarily to meet the needs of individuals having note-taking responsibilities, including reporting and record keeping, in community organizations, and in other personal use activities.

STS 0002  Beginning Shorthand  High School Cr. 1
Students enrolling in this course will learn the shorthand alphabet with emphasis on dictation and transcription and the application of correct principles of grammar. Standards of performance in transcription are comparable to those of regular high school courses in beginning shorthand.

TYG 0101  Typewriting  High School Cr. 1
A course in typewriting for personal use. It is designed to assist students in acquiring mastery of the keyboard and in developing the ability to write personal and business letters accurately and in good form.

WOC 0101  General Shop, Wood  High School Cr. 1
This course provides experiences in the use of basic hand and power tools in working with wood and related materials. The work involves planning, designing, and constructing functional articles of use and value.
Community and Instructional Services Courses

The following is a list of courses which are offered to assist citizens in coping with problems relating to the areas of Environment, Health, Safety, Human Relations, Government, Child Rearing and Consumer Economics.

All of these courses are not offered every term, so interested persons should check the non-college credit class schedule published in the local newspapers a few days before the beginning of each term.

Classes are scheduled in various locations throughout the area including the four FJCC campuses, community schools and other off-campus centers.

Registration is on a first-come basis.

ART 0010 Fundamentals of Art for Older Adults
This course is designed for senior adults. Instruction will be provided in the fundamentals of arts, encompassing composition, harmony, rhythm, balance, emphasis, proportion, line, form, texture, and color. The student may carry out projects using one or more of the following media: charcoal, Cray-pas, pencils, pen and ink, oils, acrylics, watercolors, pastels, or even collage.

ART 0011 Drawing for Older Adults
This course is designed for senior adults. It is an introduction to the basic disciplines of drawing, using charcoal, pencil, pen and ink, Cray-pas, pastels, and colored pencils.

ART 0012 Watercolor, Acrylic, Oil Painting for Older Adults
This course is designed for senior adults. The media used in this course is limited to oil, acrylic, and watercolor. Instruction will be provided in techniques of watercolor, acrylic and oil painting and in color theory. It will be helpful if the student already has some experience using fundamentals of art; however, instruction will include drawing and other basics.

CED 0005 Consumer Education Law
This course is designed to provide low-income residents with basic facts regarding the laws of daily living in a community. It has been organized to interpret the law in a comprehensive and easily understood manner. It will deal primarily with the laws that govern the lives of low-income and under-educated citizens. The course will assist these citizens to know what local help is available to them. This course is also designed to promote positive attitudes toward and involvement in utilization of the American free enterprise system as it deals with land, people, organization, and government.

COA 0020 Consumer Gardening
This course provides instruction on the techniques of starting, maintaining, and harvesting a consumer garden. Instruction includes the following areas: kinds and varieties of vegetables, planning the garden, landscaping with vegetables; proper soil preparation, composting; planting the garden, proper care of the garden; garden pests; harvest and storage mini-gardening; kitchen gardening, nutritional value of vegetables; and canning and freezing methods.

COP 0001 Community Emergency Preparation
This course is designed to prepare individuals for rendering essential community services on a voluntary basis in time of serious emergency or disaster.

CRW 0010 Personal Life History Writing
This course is designed for older adults. The students will learn to write their personal life histories through three components: reminiscence, instruction, and preparation of material. The students will be guided through remembering their past, cataloging these memories into a filing system, using old photographs, writing the first paragraph, writing one experience, writing expanded stories, compiling a table of contents and index, layout of material, printing preparation, duplication and distribution.

ECO 0002 Personal Money Management
This course is designed to assist adults in handling their day-to-day and long-term financial affairs. Course emphasis is on subjects important in personal money management. Included are budgeting techniques, combating inflation, types of bank accounts, borrowing and use of credit, types of investments, taxation, and retirement and estate planning.

ECO 0004 Home Economics for Senior Adults
This course includes topics which are designed to provide older adults with instruction that will help them cope with health and economic problems of aging. Instruction will be conducted in one or all of the following areas: Needlework, Basic Clothing Instruction, Advanced Clothing Instruction, Food Preparation, Nutrition.

ECO 0005 Getting It All Together on a Limited Income
This course is designed to assist persons in managing their lives and handling the stress involved in surviving on a very limited income. Practical information and discussions will cover topics such as smart shopping, budgeting, parenting, resolving conflict with neighbors, caring for your body, and launching a plan of action for life improvements.

ECO 0006 Career Planning
This course is designed to meet the needs of adults who wish to start or change careers. In an effort to choose a career path, students will explore their own skills and abilities by use of vocational testing, class discussion, and research. They will learn interviewing skills, resume writing, and how to approach the job market.

ECO 0010 Back to School, Back to Work
An intensive eighty-hour class to aid individuals with immediate need to make a decision about returning to school, work or both. Emphasis will be on developing self respect and confidence, assertive communication skills, life directions and goals so that students take responsibility for their lives and become self-supporting. Resume writing, career fields, job training, job search, and interview techniques will be covered.
ECY 0006  Everything You Want To Know About Solar Energy and More
This course is designed to inform the general public of the development and uses of solar energy to provide insight for the general public to know what is available from solar energy and have a general understanding of the subject.

ESY 0003  Safety Education
This course is designed to cover the principles and information related to individual, home, and public safety.

EVR 0010  Stress Management
This course exposes students of all ages to an understanding and appreciation for the effects of environmental and personal stress. Stress-related disorders, their causes and controls, and numerous stress management techniques will be discussed from the lay perspective. The primary objective of this course is to enable the students to assume an active role in the reduction of unnecessary stress and anxiety in their daily lives. An extensive bibliography of suggested readings will be provided.

FAR 0005  Teaching Your Children About Sex
A course designed to enable parents and prospective parents to deal more effectively and honestly with children’s questions about their own sexuality.

GRA 0010  Graphic Art for Older Adults
This course is designed for senior adults. It is an introduction into the field of graphics involving various media and forms such as relief and serigraph. Drawing, printing, matting, and framing will be included.

HEN 0002  Personal Safety
This course is designed to provide skills, knowledge, training and information in securing one’s personal safety at home as well as self-defense and street safety.

HEN 0003  Education for Parenthood
A series of classes for expectant mothers and fathers to study maternity care, parental adjustment, baby needs, and physical preparation for pregnancy, labor, and postpartum periods. Expectant mothers must have their doctor’s permission to enroll and must be in the last three months of pregnancy.

HEN 0004  Early Pregnancy Preparation Class
This course is designed for mother-to-be in the early months of pregnancy. The course will cover exercises, physical fitness, nutrition, and baby care.

HEN 0005  Education for Parenthood Refresher
This is a four-week course designed for expectant couples who have previously taken the Education for Parenthood course during an earlier pregnancy. It provides a review of the relaxation and breathing techniques to be used during labor and delivery, as well as an introduction to any recent developments in childbirth education.

HEN 0006  Continuing Education for Parenthood
A course designed to help new parents cope with the unexpected problems which arise as a result of a new baby, including child development, sibling problems, illnesses, family adjustments, and baby care. No one particular course of action is recommended, but many options are presented to the couples. Open discussion and exchange of ideas is encouraged.

HEN 0007  Creative Activity in the Nursing Home
This course is designed with the needs of nursing home residents in mind. It includes a variety of creative activities which help keep hands, bodies, and minds alert and active. It will provide instruction in one or more of the following areas: creative writing, drawing, painting, crafts, food preparation, needle skills, health, reality orientation, remotivation, and use of leisure time.

HEN 0009  Preparation for Cesarean Childbirth
A series of classes designed to meet the needs of couples anticipating a Cesarean delivery and to promote family-centered Cesarean care. Course material will include discussion of emotional needs, nutrition, anatomy and physiology of pregnancy and the Cesarean birth techniques to use for the birth and after the delivery, and adjustments during the postpartum period.

HEN 0010  Basic Cardiac Life Support
This course is designed to teach one how to apply cardiopulmonary resuscitation. Basic cardiac life support is the new name given cardiopulmonary resuscitation. It is that particular phase of emergency cardiac care that either, 1) externally supports circulation and respiration; or 2) prevents a circulatory or respiratory arrest or insufficiency through prompt intervention. Any trained person may apply B.C.L.S. An Emergency Medical Services System (EMS) is a community-wide co-ordinated means of responding to sudden illness or injury. This course will teach one how to activate our own community EMSA system as well as what one may expect of the system. Each student will receive certification from the American Heart Association for successful completion of this course.

HEN 0012  Cardiac Rehabilitation Self Care
This course is designed to educate the individual who has suffered an acute myocardial infarction, post-operative coronary artery bypass, surgery, or who has been determined a high cardiac risk. It also provides education to family members and helps improve the quality of life for those involved with the program.

HEN 0014  Physical Management and Stress Alleviation
A therapeutic course designed for use in adult institutions. Its purpose is to instruct students in methods or physical maintenance and stress reduction or alleviations. The course will include instruction in body awareness, fine and gross motor activities, ways of dealing with stressful situations, and practical usage of the various methods taught.

HEN 0015  Taking Care of Your Body
A course which explores matters pertinent to physical and personal well-being. Topics will include consumer health, exercise, nutrition, stress reduction, heart disease, diabetes, cancer, contraception, menopause, rape, diet, the medicine chest, health careers and cardiopulmonary resuscitation.

HEN 0020  Mental Fitness
This course is intended to inform the public about mental health related topics and teach mental health skills which citizens can use in their lives. A variety of programs are available under this title, and course length is dependent upon the topic to be covered.

HEN 0025  Asthma and the Family
This is a four-week course to provide educational sessions with the pediatric asthma patient and family. This program provides positive concepts as to how one deals with asthma, the reactions of the illness, disabilities, and prevention of severe pulmonary disease is adulthood.

HEN 0030  Weight Management
This course is designed to make the student aware of the reasons for overweight and to present methods to resolve overweight problems through a nutritionally sound diet. This course will help the student to develop better eating habits and a more positive self-concept. It will help to
develop workable solutions to the student's individual problems. Individual attention will be given to each student in planning menus specified for particular needs, as well as providing nutritionally sound methods of food preparation.

**HEN 0035** How to Stop Smoking in Five Days
This course is designed to demonstrate how an inveterate smoker can overcome the habit and stop smoking cigarettes by following a self-imposed five-day plan.

**HEN 0040** A Growing Problem: Drug Use and Abuse
This course is designed to raise the community's awareness and understanding of the problem of drug abuse. This will be accomplished by providing information concerning the magnitude of the problem of drug abuse, the legal aspects of the problem, and signs and symptoms of the drug abuse, as well as the problem of drug abuse in women, youth and senior citizens. Information relative to prevention and treatment of the problem will be included in this course.

**HES 0005** Crime Prevention
This course is directed toward the reduction and prevention of crime in neighborhood communities. Emphasis is placed upon each participant's particular problem and concerns relating to crime prevention. The program includes the history of crime prevention, components of the criminal justice system, and personal and home security measures such as locks, alarms, lighting, crimes against women and the elderly, and community involvement in crime prevention.

**HIS 0010** Women In History
This course is designed for exploration of the images, experiences, contributions and perspectives of women in various cultures from early times through the present. Women's roots will be emphasized from the pre-Greek period through the Middle Ages, the Industrial Revolution, and 19th and 20th century developments in European, African, American and some other cultures.

**MUS 0010** Choral Music for Older Adults
This course is designed for senior adults. Emphasis will be on group singing and performance. Some music history and music appreciation may be included. Group experience may be useful to individuals as they participate in other community musical activities.

**MUS 0011** Community Orchestra for Older Adults
This course is designed for senior adults. It provides an opportunity for older musicians to practice and performing group instrumental musical activities. It will accommodate people who want to learn to play an instrument as well as people who want to improve their existing instrumental skills. Any instrument is welcome; however, participants must provide their own. Public performances will be given periodically.

**PEA 0001** Self Defense for Women
This course is designed primarily for women who want to learn the art of self defense. Conditioning exercises, safe falling, and defensive techniques will be stressed. Training and information related to preventative measures to assure safety are included.

**PEA 0002** Playground Supervision
This course covers the basic instruction and concepts that parents or teachers need in guiding the child's mental, social, and physical development. It deals with after-school playground supervision of games, dances, materials, progression, and techniques in teaching games and rhythmical activities to pre-school and school age children.

**PHI 0004** Attitudes Toward Death
Death poses questions of ultimate significance to us. Many people feel ill-prepared to face their own death or the death of a loved one. Through the centuries, humans have thought about death, speculated about immortality and expressed their feelings in a wide variety of ways. The question of death has taken on new dimensions in our century — a time when life processes can be supported by machines and when traditional religious beliefs are challenged. Toward the end of the course we will look at the funeral and burial practices of our day and explore ways that legal papers, insurance and funeral arrangements can be prepared more expeditiously and meaningfully.

**PSY 0004** Psychology of Awareness
This course is designed for senior citizens. It includes exploration, experimentation, and interaction designed to assist participants to a fuller and more satisfying experience of self, others, and environment through heightened appreciation of here-and-now reality; training and practice in emotional self-support and conflict resolution utilizing Gestalt and Transactional Analysis approaches.

**PSY 0006** Skills for Parents
This course will emphasize how to communicate better with your children (and other people, too). Some of the skills that will be covered are how to really listen, how to communicate your feelings, how to solve average problems in the family, and become prime trainers, educators, and enrichers of your children.

**PSY 0007** Mental Health First Aid
This course is to teach the student to provide immediate stop-gap help to persons immediately in danger of committing suicide. The student will receive instruction on prevention of suicide, drug abuse, and other mental health disorders — includes identifying problems, recognizing, and responding to a crisis.

**PSY 0009** Education — A Family Affair
This course is designed to assist parents of school-age children with interpretation of school requirements, standardized test scores, courses of study, academic deficiencies, help with reading, writing, spelling, and mathematics for their children, and other school related problems. This course will include developing skills to help parents assist their school-age children in study methods, listening habits, peer group relationships and coping skills necessary to succeed in school.

**PSY 0010** Divorce: A New Challenge
This course is designed to help divorced people deal in a positive way with their changing roles in society. Discussions will include topics such as the emotional impact of divorce, family relationships, single parenting, legal and financial issues, entering the work force or changing jobs, developing new personal/social relationships, and making individual plans for action.

**PSY 0011** Assertive Communication Training I
The course includes the theory and practice of assertive behavior; awareness of one's interpersonal rights; distinguishing among non-assertive, assertive and aggressive responses; practicing simple assertions as well as emphatic, negative feelings; and confrontive assertions and other interpersonal problems relating to coexistence and brotherhood.

**PSY 0015** Pre-Release Program for the Incarcerated
This pre-release program has been created to offer guidance and counseling to the incarcerated as the transition from confinement to freedom. This program will provide the means for reintegrating and readjusting the offender back into the community.
PSY 0030  Single Parenting – Becoming a New Kind of Family
The course is designed to assist single parents in raising children alone. Active participation, discussions, and lecture will be used in covering topics including children’s reactions to being from a one-parent family; parent-child communication; relationships with the absent parent; developing outlets for yourself; and developing a sense of being a complete family.

PSY 0035  Survival: Coping with Separation and Divorce
This program is designed as an open-entry, open-exit class for those who are contemplating or are in the process of divorce. Focus is on persons who are in immediate need of help. The program will offer emotional support and an opportunity to deal with issues such as crisis, loss, loneliness, anger and guilt, and finding new strengths. Options for referral services will be presented.

PSY 0040  Understanding Your Child
This course deals with specific issues and concerns that parents may have as they help their children grow and develop to their full potential. Topics to be covered include the child’s stages of growth and development, parent-child communication, discipline, helping your child learn.

SOC 0005  Education for the Aging
Courses are offered under this title which are designed to provide middle-aged and older adults with information that will help them cope with the problems of aging. Information on pre-retirement planning, the psychological aspects of aging, the role of the aged in the modern world, and courses dealing with health, housing, financial planning, and worthy use of leisure time will be explored. Implications of current social, scientific, economic, and political developments on the older citizen are studied.

SOC 0007  Interpersonal Relations for the Handicapped
This course is designed to teach the handicapped person appropriate social and sexual behavior for everyday living in our society. The students will receive instruction in etiquette, hygiene, social roles and relationships, authoritative relationships, and dating, ramifications and implications.

SOC 0009  Parents of the Handicapped
This course is designed to provide parents with information beneficial to them in rearing their handicapped child. Some of the topics to be discussed will be attitudes, behavior problems, reality therapy, legal responsibilities and rights, appropriate social activities and behavior, marriage and basic education skills.

SOC 0010  Life Planning
This course is designed to provide the basic facts for understanding money from a simple workable budget through the potential of aggressive investments. Information will be made available by presenting everyday life occurrences including such topics as the meaning of joint ownership to a wife as well as her spouse; what “gifts” are taxable and when and how to choose a safe but profitable investment, large or small. Other topics to be introduced will include banking, establishing credit, taxes, installment buying, insurance, real estate, wills and trusts.

SOC 0020  Public Forum
The public forum will provide an opportunity for interested citizens to hear specialists speak on pending community problems and to have the opportunity of expressing themselves concerning these problems.

SOC 0025  Opening Doors For The Widowed
Course discussions deal with specific topics to help the widowed cope with the emptiness of widowhood and reaffirm life. Class topics include information on legal matters, adjustment to grief and other emotions, choosing a new vocation or avocation, returning to school or job training and building a new social network. Although any widowed person is eligible to enroll, those widowed within the past few years will find it most helpful. Instructors are widows or those who have been widowed.

SOP 0001  Human Relations
A down-to-earth review of modern concepts in human relations including allocation of time, motivation, communication, race relations, and emotional stability to instill positive attitudes about living and working together.

SOP 0002  Leadership Training
This course is designed to develop skills in group or community leadership. It covers techniques of group work and group dynamics, effective speaking, and how to conduct a meeting.

SOP 0003  Parliamentary Procedure
This course includes study and practice of the principles and rules governing deliberative assemblies. It is designed to benefit the presiding officer and member alike in participation in local government, communication with public officials, and ensuring each individual’s rights.
Recreational/Avocational Courses

Florida Junior College at Jacksonville offers Avocational and Recreational courses on request from the community. These courses are supported by fees (self-supporting) and not funded by the State. The fee structure for these courses is calculated to cover the direct instructional cost of offering the course to the community. The list of available courses is included here.

AAC 0810 Personal Income Tax Seminar
AIO 0010 Aviation Ground School-Private Pilot
AIO 0014 Aviation Ground School-Instrument Rating
APD 0810 China Painting
APD 0811 Ceramics I
APD 0812 Ceramics II
APD 0813 Pottery
ART 0810 Arts and Crafts
ART 0811 Decoupage
ART 0812 Watercolor Painting
ART 0813 Painting, Naturalism to Abstract
ART 0814 Shell Craft
ART 0815 Metal Sculpture
ART 0816 Macrame I
ART 0817 Macrame II
ART 0818 Creative Art for Children
ART 0820 Stained Glass Window Construction
ART 0822 Creative Cartoons
BIO 0810 Genealogy – Discovering Your Family Heritage
BUN 0810 TV Communications
CCL 0810 Introduction to Numismatics
CLT 0111 Sewing for Selling
CLT 0113 Creative Needlecraft
CLT 0115 Basic Sewing
CLT 0116 Advanced Sewing
CLT 0811 Beginning Crewel Stitchery
CLT 0813 Japanese Embroidery
CLT 0816 Patchwork Quilting
CLT 0817 Rug Hooking
CLT 0818 Rug and Wall Hangings
CLT 0819 Weaving
CLT 0821 Creative Wardrobe Planning
CLT 0823 Creations in Fabrication
CMP 0511 Boutique Sewing
CSE 0810 How to Buy and Sell Your House
CSE 0811 How to Reduce Costs Around the Home
CSE 0812 How to Win Contests
CSE 0813 Interviewing: Basic Techniques
CSE 0814 Memory and Concentration
CSE 0816 Know Your Car
DRA 0810 Acting for Fun and Self Expression
DRA 0811 Art of the Amateur Magician
DRA 0812 Introduction to Theatre for Children
ENG 0811 Letter Writing
ENR 0810 Motorcycle Care and Repair
ENR 0815 How To Service Your Small Engines
FMT 0810 Modeling I
FMT 0811 Modeling II
FON 0001 Food for You
FON 0005 Health and Weight Control
FON 0101 Gourmet Foods
FON 0103 Microwave Cooking
FON 0105 Elegant Entertaining
FON 0810 Adventures in Dining
FON 0811 Oenology: The Study of Wines
FON 0812 Eat Smart
FSM 0310 Cake Decorating
GRA 0810 Graphoanalysis (Handwriting Analysis)
HEF 0003 Flower Arranging
HEF 0810 Upholstery
HEN 0810 Yoga
HOM 0002 Clothing Selection
HRT 0810 Basic Home Building
HUM 0810 Travel: Mostly Europe
HUM 0811 Introduction to Antiques
JEW 0810 Jewelry Crafting
LEI 0810 Fine Arts Enrichment Center Summer Program
LIS 0810 Reading for Leisure
LIT 0810 Book Review
LIT 0812 Women in Literature
LIT 0814 The Southern Literary Renaissance
LTW 0810 Sandal Making and Leather Construction
MET 0810 Meteorology for Airman and Boatman
MUS 0810 Singing For Pleasure
MUS 0811 Piano Lab – Beginning
MUS 0812 Beginning Guitar
MUS 0813 Community Jazz Lab
MUS 0814 Music Readiness I
MUS 0815 Music Readiness II
MUS 0816 Applied Music I
MUS 0817 Applied Music II
MUS 0819 Applied Music III
MUS 0820 Musicianship Class
MUS 0821 Group Music Instruction
MUS 0822 Music Seminar
OCE 0810 Secrets of the Sea
ORH 0810 Raising Indoor Plants
ORH 0811 Home Landscape: Design
ORH 0812 Ornamental Horticulture
PEA 0810 Modern Jazz Dance I
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