

# Course Descriptions

## 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 be 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:

- 0 - college preparatory credit  
(not for degree)
- 1 - freshman year
- 2 - 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. 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

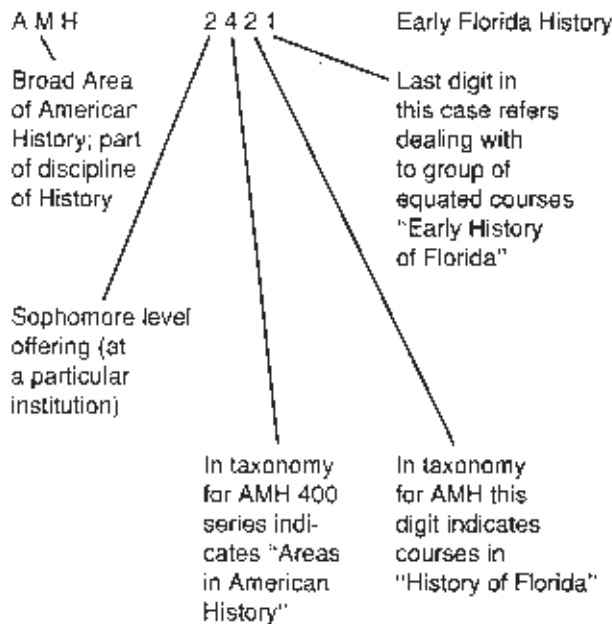
Prefixes and numbers in the course numbering system are not chosen at random; they are designed to describe course content in an organized fashion within a classification system developed for each subject matter area.

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 infinitely 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):



(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 Community 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.

## Classification Discipline

Prefix

Accounting: General	ACG
Advertising	ADV
Aeronautical Science	ASC
Air Conditioning/Refrigeration: Technology	ACR
American History	AMH
American Literature	AML
Anthropology	ANT
Applied Accounting	APA
Applied Biology	APB
Arabic Language	ARA
Architecture	ARC
Art	ART
Art History	ARH
Asian History	ASH
Astronomy	AST
Aviation Maintenance Technology	AMT
Aviation Management	AVM
Aviation Technology Flight	ATF
Aviation Technology Theory	ATT
Banking	BAN
Banking: Related Courses	BRC
Biological Science - Introductory	BSC
Botany	BOT
Building Construction	BCN
Building Construction Trades	BCT
Business Law	BUL
Chemistry	CHM
Child Development	CHD
Chinese	CHI
Clothing and Textiles	CTE
Comparative Politics	CPO
Computational/Numerical Methods	CNM
Computer and Information Systems	CIS
Computer Engineering Technology	CET
Computer in General Studies	CGS
Computer Programming	COP
Cooperative Education	COE
Creative Writing	CRW
Criminal Justice Development	CJD
Criminal Justice Technology	CJT
Criminology and Criminal Justice	CCJ
Dance Activities	DAA
Dental Assisting	DEA
Dental Hygiene	DEH
Dental Support	DES
Developmental Psychology	DEP
Dietetic	DIE
Economics	ECO
Education: Early Childhood	EEC
Education: Foundations	EDF
Education: General	EDG
Education: Hard of Hearing and Deaf	EHD
Educational Psychology	EDP
Electrical/Electronics Repair	EER
Electronic Engineering Technology	EET
Electronic Specialty Technology	EST
Emergency Medical Services	EMS
Engineering Geographical Science	EGS
Engineering Technology: Civil	ETC
Engineering Technology: Drafting	ETD

Engineering Technology: General	ETG	Modern Hebrew Language	HBR
Engineering Technology: Industrial	ETI	Music	MUS
Engineering Technology: Mechanical	ETM	Music: Brasses	MVB
English as a Second Language (for Non-Native Speakers)	ENS	Music: Commercial	MUM
English as a Second Language - Preparatory	ESL	Music: Composition	MUC
English Composition	ENC	Music: Conduction	MUG
English Literature	ENL	Music: Education	MUE
European History	EUH	Music: History	MUH
Film	FIL	Music: Keyboard	MVK
Finance	FIN	Music: Literature	MUL
Fire Fighting and Protection	FFP	Music: Music Ensembles	MUN
Food Science	FOS	Music: Opera/Musical Theatre	MUO
Food Service Systems	FSS	Music: Other Instruments	MVO
French Language	FRE	Music: Percussion	MVP
General Business	GEB	Music: Strings	MVS
General History	HIS	Music: Theory	MUT
Geography: Regional Areas	GEA	Music: Voice	MVY
Geography: Systematic	GEO	Music: Woodwinds	MVW
Geology	GLY	Nursing Practice and Theory	NUR
German and Germanic Languages	GER	Oceanography: Biological	OCB
Graphic Arts	GRA	Oceanography: General	OCE
Health, Leisure, and Physical Education	HLP	Office Systems Technology	OST
Health Science	HSC	Oral Interpretation	ORI
Home Economics:		Ornamental Horticulture	ORH
Consumer Affairs	COA	Para-Legal Assistant	PLA
Home Economics:		Philosophy	PHI
Family Development	FAD	Photography	PGY
Home Management and Equipment	HME	Physical Education Acts (General)-- Object Centered, Land	PEL
Hotel and Restaurant	HFT	Physical Education Acts (General) -- Performance Centered, Land	PEM
Housing and Home Design	HHD	Physical Education Acts (General)-- Water, Snow, Ice	PEN
Humanities	HUM	Physical Education Acts (Professional)-- Object Centered, Land	PEO
Human Nutrition	HUN	Physical Education Theory	PET
Industrial Education Applied	IEA	Physical Science	PSC
Interdisciplinary Science-Natural	ISC	Physics	PHY
Interdisciplinary Social Sciences	ISS	Political Science	POS
Interdisciplinary Studies	IDS	Process Biology (Cell/Molecular/Ecology/ Genetics/Physiology)	PCB
International Relations	INR	Psychology	PSY
Italian Language	ITA	Radio-Television	RTV
Japanese Language	JPN	Reading	REA
Latin American History	LAH	Real Estate	REE
Leisure	LEI	Religion	REL
Library Sciences	LIS	Respiratory Therapy	RET
Literature	LIT	Risk Management and Insurance	RMI
Management	MAN	Russian Language	RUS
Management: Applied	MNA	Social Psychology	SOP
Marketing	MAR	Sociology, General	SYG
Marketing Applications	MKA	Spanish Language	SPN
Mass Media Communications	MMC	Speech Communication	SPC
Mathematics: Algebraic Structures	MAS	Speech Pathology and Audiology	SPA
Mathematics: Applied	MAP	Statistics	STA
Mathematics: Calculus and Pre-calculus	MAC	Student Life Skills	SLS
Mathematics: General	MAT	Surveying and Related Areas	SUR
Mathematics: General and Finite	MGF	Tax	TAX
Mathematics: Technical and Business	MTB	Theatre	THE
Medical Laboratory Technology	MLT	Theatre Arts	TPP
Metal Trades	MTR		
Meteorology	MET		
Microbiology	MCB		
Modern Greek Language	GRK		



Theatre Production and Administration  
Transportation  
Zoology

TPA  
TRA  
ZOO

## COURSE DESCRIPTIONS

COLLEGE CREDIT COURSES IN THIS CATALOG WITH THE (T) SYMBOL COUNT IN THE ASSOCIATE IN ARTS DEGREE AND ARE GUARANTEED TRANSFERABLE FOR THOSE STUDENTS TRANSFERRING WITH THE ASSOCIATE IN ARTS DEGREE. WHEN A STUDENT TRANSFERS WITHOUT THE ASSOCIATE IN ARTS DEGREE, THE TRANSFERABILITY OF THESE COURSES IS DECIDED BY THE RECEIVING INSTITUTION.

COLLEGE CREDIT COURSES IN THIS CATALOG WITHOUT THE (T) SYMBOL WILL NOT COUNT IN THE ASSOCIATE IN ARTS DEGREE. THE TRANSFERABILITY OF THESE COURSES IS DECIDED BY THE RECEIVING TRANSFER INSTITUTION.

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.

In the college credit course descriptions listed below the contact hours listed refer to the number of contact hours per week during a fifteen week semester. When a course is taught during a term which is shorter or longer than fifteen weeks, the number of contact hours per week is adjusted proportionately.

### **ACG – Accounting: General**

#### **ACG 1003 General Accounting I (T) 3 cr.**

This course is a study of the sole proprietorship form of business organization with an emphasis on the following topics: the accounting cycle, journalizing and posting, deferrals and accruals, adjusting and closing procedures, the worksheet, preparing financial statements, and the use of special journals and subsidiary ledgers, an introduction to the voucher system, bank reconciliations, and the petty cash fund. The course includes special problems for both a service oriented business and a merchandising concern. The student must satisfactorily complete a practice set. Three contact hours.

#### **ACG 1004 General Accounting II (T) 3 cr.**

Prerequisite: ACG 1003. This course consists of a further study of proprietorship and corporations. Emphasis will be placed on the following topics: inventory valuation, depreciation and fixed asset valuation, payroll accounting, the use of data processing in accounting with an emphasis on internal control, and an introduction to partnership and corporate accounting, including the basic characteristics and financial structure of these two business forms. The student must satisfactorily complete a practice set. 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 (T) 3 cr.**

This course consists of a study of the sole proprietorship form of business organization with an emphasis on the following topics: the accounting cycle; adjusting, closing and reversing procedures; the worksheet, preparing financial statements, accounting for a merchandising operation, special journals, and a study of internal control including the voucher system, petty cash and bank reconciliations. Other topics include payroll, inventory valuation, receivables and payables, accounting for non-current assets, and introduction to partnership accounting. Students must satisfactorily complete a practice set. The satisfactory completion of ACG 1003 and ACG 1004 is equivalent to the completion of ACG 2001. Three contact hours.

#### **ACG 2011 Principles of Accounting II (T) 3 cr.**

Prerequisites: ACG 2001, or ACG 1003 and ACG 1004. This course is a continuation of ACG 2001 with coverage of the following topics: accounting for stocks, long-term liabilities, investments, the statement of changes in financial position and financial statement analysis. In addition, the course covers the study of managerial accounting including job order, process and standard cost systems, variance analysis, budgeting, cost-volume-profit analysis and capital budgeting. Three contact hours.

#### **ACG 2100 Intermediate Accounting I (T) 3 cr.**

Prerequisite: ACG 2011. This course is 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 (T) 3 cr.**

Prerequisite: ACG 2100. This course is a continuation of ACG 2100 with coverage of the following topics: a study of corporate contributed capital, retained earnings and dividends, earnings per share, long-term debt and investments, pension plans and leases, accounting for income taxes, the statement of changes in financial position, accounting for price level changes, and further statement analysis. Three contact hours.

#### **ACG 2360 Cost Accounting (T) 3 cr.**

Prerequisite: ACG 2011. This course interprets and analyzes cost in three major areas: (1) planning and controlling routine operations (break-even analysis; job order and process cost systems), (2) inventory valuation and income determination (budgeting and standard costing), (3) policy making and long-range planning (capital budgeting). Three contact hours.

#### **ACG 2500 Fund Accounting (T) 3 cr.**

Prerequisite: ACG 2011. This course, recommended for Accounting, Associate in Science students, 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.

**ACR – Air Conditioning/Refrigeration: Technology****ACR 1000 Introduction to Air Conditioning and Refrigeration 4 cr.**

This course teaches refrigeration, heat production, heat transfer and specific heat, temperature pressure chart, pressure relations, silver brazing, soft soldering, flaring and swaging. Eight contact hours. (Laboratory)

**ADV -- Advertising****ADV 2000 Advertising (T) 3 cr.**

This basic course, designed to familiarize the student with the function of the advertising profession, covers consumer behavior, research and market segmentation. The course examines various kinds of advertising departments as well as the functions of the advertising agency itself—copy, art, media selection, TV-radio production, print production and account management. Students will prepare print advertisement and produce TV and radio commercials. Three contact hours.

**AMH -- American History****AMH 2010 United States History to 1865 (T) 3 cr.**

This course in 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. The course includes reading and writing competencies. Three contact hours.

**AMH 2020 United States History From 1865 to the Present (T) 3 cr.**

This course, United States History 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 2070 History of Florida (T) 3 cr.**

This course in the History of Florida emphasizes 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 2092 Afro-American History and Culture (From African Origins Through Reconstruction) (T) 3 cr.**

This survey course deals with the trends, institutions, events, and personalities of black people in the American past, including a brief treatment of the African origin, (the development of slavery) the black people during the Revolutionary War, and the black people during the Civil War and Reconstruction. This course stresses the origin of racism, general minority problems, cultural appreciation, and black ideas. Three contact hours.

**AMH 2093 Afro-American History and Culture (From World War I to the Present) (T) 3 cr.**

This course is a non-sequential continuation of AMH

2092 with special emphasis on present and projected developments among black people. This course also includes the black people and two World Wars and their aftermath, as well as the roots and manifestation of the Civil Rights and Black Power movements. Three contact hours.

**AML – American Literature****AML 2012 American Literature: Colonial Times to 1900 (T) 3 cr.**

Prerequisite: ENC 1101. This course is a critical study in selections from American Literature: Colonial Period to the late 19th Century. Three contact hours.

**AML 2023 American Literature: 1900 to the Present (T) 3 cr.**

Prerequisite: ENC 1101. This course is a critical study of selections from American Literature: late 19th Century to the present. Three contact hours.

**AMT -- Aviation Maintenance Technology****AMT 1811 Aircraft Airframe Mechanic 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. Forty-five contact hours.

**AMT 1812 Aviation Technology Maintenance 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. Forty-five contact hours.

**AMT 1820 Aircraft Powerplants Mechanic 3 cr.**

This course will provide instruction in theory, maintenance procedures, and safety precautions associated with aircraft powerplants. Successful completion of the course will assist the student in preparing for the FAA licensing examination as an Airframe and Powerplant Mechanic. Forty-five contact hours.

**ANT -- Anthropology****ANT 2410 Cultural Anthropology (T) 3 cr.**

This course consists of 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 (T) 3 cr.**

This course consists of 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 3 cr.**

Prerequisite: ACG 1004. This course consists of the application of accounting principles and concepts to financial analysis, cost, budgeting and investment of hospitality properties. The course emphasizes controller functions, profit and loss statements, statistical analysis, and forecasts. Three contact hours.

### **APA 2750 Life Insurance Accounting 3 cr.**

The course corresponds to Part IV of the Life Office Management Association (LOMA) Insurance Education Program. The course covers the principles of bookkeeping and accounting as an aid in understanding the life insurance accounting practices. Three contact hours.

## **APB -- Applied Biology**

---

### **APB 1150 Life in Its Biological Environment (T) 3 cr.**

This course is an introduction to biological structure, function processes, principles and concepts. This course fulfills the general education requirement. Three contact hours.

### **APB 1150L Biology Lab (T) 1 cr.**

Corequisite: APB 1150. This course provides 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 Human Systems 4 cr.**

This course, intended for students in the Dental Assisting program, consists of a systematic study of the human body in health and disease. The course emphasizes the sciences of anatomy, physiology and pathology but also includes elements of microbiology and chemistry in the examination of the structure and function of all the body's systems. Five contact hours: three lecture hours; two laboratory hours.

### **APB 1260 Cardiopulmonary Anatomy and Physiology 4 cr.**

This course, designed to offer a thorough anatomical and physiological examination of the cardiopulmonary system, consists of an introduction to electrocardiology and chest roentgenology. In addition, the course includes a correlated examination of the renal system and circulatory system where relevant. Four contact hours.

### **APB 1650 Pharmacology for the Respiratory Therapist (T) 4 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. Four contact hours.

### **APB 2190C Human Anatomy and Physiology I (T) 3 cr.**

The student will benefit by taking CHM 1032C, APB 1150, BSC 2011C, ZOO 1010C, or High School Chemistry

prior to enrolling in APB 2190C. This course, a study of the gross morphology and physiology of the human, includes sections concerned with cells, tissues, the musculo-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 (T) 3 cr.**

Prerequisite: APB 2190C. A continuation of APB 2190C. This course covers the nervous system, special senses, the endocrine system, the reproductive system, human inheritance and embryonic development, the respiratory system, the urinary system, and fluid and electrolyte dynamics. Four contact hours: two lecture hours; two laboratory hours.

### **APB 2293 Pulmonary Pathology (T) 4 cr.**

Prerequisite: APB 1260. Pulmonary pathology gives an in-depth study of the more common diseases of the cardiopulmonary system including their etiology, pathophysiology, clinical picture and treatment. Four contact hours.

## **ARA -- Arabic Language**

---

### **ARA 1000 Conversational Arabic (T) 3 cr.**

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

## **ARC -- Architecture**

---

### **ARC 2120C Architectural Drafting (T) 3 cr.**

Prerequisite: ETD 1100. This course introduces residential design and planning and requires an original solution to a given residential concept. Students not only prepare original tracings consisting of floor plans, elevations, wall sections, but also produce large scale details from the original design. The emphasis of the course is on applied principles of architectural drafting and detailing. Four contact hours: two lecture hours; two laboratory hours.

## **ARR -- Art History**

---

### **ART COURSES (VISUAL ARTS)**

#### **Lecture Courses**

---

### **ARR 1000 Art Appreciation (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course supplies the non-art major with a foundation for understanding the visual arts through introduction to different media of art expression. This course includes reading and writing competencies. Three contact hours.



**ARH 1832 Art and Business - Galleries and Exhibitions (T)** 1 cr.

This course is designed to introduce art students to methods of finding and arranging exhibition opportunities for the sale of their artwork. Students will receive instruction in how to find galleries, prepare and present artwork, and how to transport art to exhibitions. One contact hour.

**ARH 1834 Art and Business - Studio Planning** 1 cr.

This course is designed to instruct students in determining specific studio needs. The course will provide students with instruction in layout and design, costs, and costing, and supplies and equipment sources. One contact hour.

**ARH 1835 Art and Business - Business Planning** 1 cr.

This course is designed to instruct students in the organization of an art business. The student will receive instruction in the fundamental areas of planning, directing, organizing, and controlling in a small business. One contact hour.

**ARH 2050 Art History I (T)** 3 cr.

Prerequisite: ENC 1101 or satisfactory score on placement test. This course includes a historical and critical study of painting, sculpture, and architecture from prehistoric times to the Renaissance. This course includes reading and writing competencies. Three contact hours.

**ARH 2051 Art History II (T)** 3 cr.

Prerequisite: ARH 2050, ENC 1101 or satisfactory score on placement test. This course is a continuation of the history and criticism of art from the Renaissance to the present. This course includes reading and writing competencies. Three contact hours.

**ARH 2941 Gallery Practicum (T)** 1 cr.

Prerequisite: ARH 1000 or permission of the instructor. This course offers the student the practical experience of organizing gallery exhibitions including exhibit development, promotion, installation, space-design, and publicity as well as the other issues involved in exhibit organization. Gallery director lectures will be included. One contact hour.

**ART -- Art****FOUNDATION COURSES****Design****ART 1006C Artists' Tools and Equipment (T)** 1 cr.

This course is an introduction to safety practices, hand and power tools, materials, and processes used in making art. Two contact hours: one lecture hour: one studio hour.

**ART 1201C Design I (T)** 3 cr.

This course is an introduction to the field of the visual arts through the study of the elements and principles of design. The course explores a variety of materials and techniques with emphasis on line, color, texture, form and in two-dimensional space organizations. Six contact hours: two lecture hours; four studio hours.

**ART 1202C Design II (T)** 3 cr.

Prerequisite: ART 1201C. This course continues the study of the elements and principles of design. The course explores a variety of materials and techniques with emphasis on three-dimensional space organization. Six contact hours: two lecture hours; four studio hours.

**ART 2955 Fine Art Portfolio (T)** 1 cr.

This course will provide the student the necessary skills to put together and present a portfolio of art work. Topics include image presentation, photographing works, and preparing a resume. One contact hour.

**Drawing****ART 1300C Drawing I (T)** 3 cr.

This course emphasizes 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 (T)** 3 cr.

Prerequisite: ART 1300C. This course is a continuation of ART 1300C. Six contact hours: two lecture hours; four studio hours.

**ART 2430C Serigraphy I (T)** 3 cr.

Prerequisite: ART 1201C. This course includes an introduction to the basic techniques of Serigraphy, including standard stenciling processes such as cut stencil, and glue stencil. Six contact hours: two lecture hours; four laboratory hours.

**ART 2431C Serigraphy II** 3 cr.

Prerequisite: ART 2430C. This course is a continuation of ART 2430C and is designed to develop the student's technical skills in handling advanced art printing processes including photo-silk screening and multi-color registration prints. Six contact hours: two lecture hours; four laboratory hours.

**STUDIO COURSES****Ceramics****ART 2110C Ceramics: Hand-Building I (T)** 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 (T)** 3 cr.

Prerequisite: ART 2110C. This course, a continuation of ART 2110C, emphasizes creativity and special problems. The course also includes kiln stacking and firing. Six contact hours: two lecture hours; four studio hours.

**ART 2112C Ceramics: Wheel Throwing I (T)** 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 (T) 3 cr.**

Prerequisites: ART 2110C, ART 2112C. This course is a continuation of ART 2112C. Emphasis is on perfecting the technique of wheel throwing and on creativity with ceramic sculpture. Six contact hours: two lecture hours; four studio hours.

**ART 2115C Glaze Exploration (T) 3 cr.**

Prerequisite: ART 2111C. This course includes practice in the use of the nature of glazing techniques such as Mishika and Sgraffito, plus application and testing procedures. Six contact hours: two lecture hours; four studio hours.

**Graphics****ART 2234C Communication Graphics (T) 3 cr.**

Prerequisites: ART 1201C and ART 1300C. This course is an introduction to Graphic Design and Layout. The philosophy, disciplines, and attitudes involved in designing communication material will be developed. Emphasis will be on individual creativity. Six contact hours: two lecture hours; four laboratory hours.

**ART 2680C Computer Graphics (T) 3 cr.**

Prerequisite: ART 2234C. This course explores various existing computer programs for visual communication. Students will gain actual experience of the steps involved in commanding the computer using keyboard and the mouse. The student will produce advertising campaigns using the computer. Six contact hours: two lecture hours; four laboratory hours.

**Jewelry****ART 2150C Jewelry Fabrication (T) 3 cr.**

Prerequisites: ART 1201C and ART 1300C. This course emphasizes creative jewelry construction and design techniques. Development of general skills in materials and processes to promote individual creativity in jewelry production will be discussed. Six contact hours: two lecture hours; four laboratory hours.

**ART 2151C Jewelry Casting (T) 3 cr.**

Prerequisite: ART 2150C. This course emphasizes creative casting and enameling techniques with a focus on individual creativity and uniqueness. Six contact hours: two lecture hours; four laboratory hours.

**Painting****ART 2510C Painting I (T) 3 cr.**

Prerequisite: ART 1301C. This course introduces the student to basic oil painting techniques and color theory. Projects, designed to lead the student toward more independent concepts, include standard subjects such as still life, landscape, portrait, and figure painting. Six contact hours: two lecture hours; four studio hours.

**ART 2520C Painting II (T) 3 cr.**

Prerequisite: ART 2510C or Permission of Instructor. This course, a continuation of ART 2510C, encourages

students to plan independent projects, working within certain broad guidelines as to subject matter and technical approach. Individual interests and strengths are part of the planned program for each student; however, the course requires a certain specific number of paintings during this semester. Six contact hours: two lecture; four studio hours.

**ART 2540C Introduction to Watercolor (T) 3 cr.**

This course introduces the student to the methods and materials involved in several water media: tempera, gouache, acrylic and watercolor with emphasis on traditional watercolor techniques. Six contact hours: two lecture hours; four laboratory hours.

**ART 2550C Advanced Watercolor (T) 3 cr.**

Prerequisite: ART 2540C. This course continues the investigation of methods and materials begun in ART 2540C, with emphasis again on watercolor technique. Students are encouraged to develop a personal expression with the medium. Six contact hours: two lecture hours, four laboratory hours.

**PGY -- Photography****PHOTOGRAPHY****Photography****PGY 2101C Photography I (T) 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. The student must have a 35mm camera or equivalent. Materials fee: \$15. Six contact hours: two lecture hours; four laboratory hours.

**PGY 2102C Photography II (T) 3 cr.**

Prerequisite: PYG 2101C. This course, a continuation of PYG 2101C, emphasizes black and white and color processing. Materials fee: \$15. Six contact hours: two lecture hours; four laboratory hours.

**PGY 2104C Creative Photography (T) 3 cr.**

Prerequisite: PGY 2101C or portfolio. This is an intermediate level photography course designed to pursue historical, creative, and manipulative techniques in alternative methods of photography. Six contact hours: two lecture hours; four laboratory hours.

**ART****Printmaking****ART 2400C Printmaking I (T) 3 cr.**

Prerequisite: ART 1300C or ART 1301C. This course consists of instruction in line etching, tone etching, intaglio printing and relief printing. Six contact hours: two lecture hours; four laboratory hours.

**ART 2401C Printmaking II (T) 3 cr.**

Prerequisite: ART 2400C. This course, a continuation of ART 2400, presents a more detailed study of intaglio materials and techniques. With permission of the instructor, the student may request this course twice for additional



credit to a maximum of nine credit hours. Six contact hours; two lecture hours; four studio hours.

### **Sculpture**

#### **ART 2701C Sculpture I (T) 3 cr.**

This course, designed for the beginning sculpture student, emphasizes modeling and casting techniques in materials such as clay and plaster. Material fees are \$15. Six contact hours; two lecture hours; four studio hours.

#### **ART 2702C Sculpture II (T) 3 cr.**

Prerequisite: ART 2701C or permission of the instructor. This course, a continuation of ART 2701C, explores new and more advanced techniques and materials with individual projects encouraged. The student may repeat this course twice for additional credit to a maximum of nine credit hours. Materials fee \$15. Six contact hours; two lecture hours and four studio hours.

### **Textiles**

#### **ART 1130C Textile Design (T) 3 cr.**

This course is an introduction to textile processes including silkscreen printing, batik, tie and dye, and block printing. Six contact hours; two lecture hours and four studio hours.

#### **ART 2101C Crafts As An Element of Design (T) 3 cr.**

This course, an introduction to contemporary and traditional crafts, includes weaving, batik, silk screening, tie dye, block printing, and leathercrafts. The student may repeat this course for additional credit for up to a combined total of two semesters. Maximum, six semester hours total credit. Six contact hours; two lecture hours and four studio hours.

### **Weaving**

#### **ART 2131C Beginning Weaving (T) 3 cr.**

This course is an introduction to fiber processes including off-loom techniques, primitive loom construction and weaving, and simple four-harness loom weaving. Techniques include coiling, twining, dyeing, knotting, tapestry, and twill variations. Six contact hours; two lecture hours and four studio hours.

#### **ART 2135C Intermediate Weaving (T) 3 cr.**

Prerequisite: ART 2131C, or permission of the instructor. This course supplements Beginning Weaving and increases 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 2136C Advanced Weaving (T) 3 cr.**

Prerequisites: ART 2131C and ART 2135C, or permission of the instructor. This course, designed for the experienced weaver who wants to investigate advanced processes and further skills, emphasizes the aesthetic handling of fibers. Six contact hours; two lecture hours and four studio hours.

### **ASC -- Aeronautical Science**

#### **ASC 1010 History of Air Transportation/National Airspace System (T) 3 cr.**

This course is designed to present a chronological history of man's conquest for flying, an overview of the problems implementing the National Airspace System, airspace allocation, safety of flight, accident analysis, new developments in navigation and ATC systems, economic, social and political impacts. Three contact hours.

#### **ASC 1210 Aviation Weather (T) 3 cr.**

This course consists 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/Legislation 3 cr.**

This course is designed to familiarize the student with the Federal Aviation Regulations, contracts, insurance, liability, regulatory statutes and case law as relating to Pilots, aircraft operations and Air Traffic Control. Three contact hours.

### **ASH -- Asian History**

#### **ASH 2005 History of the Far East (T) 3 cr.**

This course consists of the history of the Far East from early modern times with emphasis on China and Japan. Three contact hours.

### **AST -- Astronomy**

#### **AST 1002 -- Introduction to Astronomy (T) 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 course will discuss the stars and planets relevant to the most modern ideas. Three contact hours.

#### **AST 1022L Astronomy Laboratory (T) 1 cr.**

Corequisite: AST 1002, or following AST 1002. This is a laboratory course which is intended to supplement AST 1002, Introduction to Astronomy. Students should have a working knowledge of mathematics at a level equivalent to MAT 0024. Students will observe the moon, planets, stars, and other objects and learn to use various types of equipment and simple procedures for obtaining useful astronomical data. If the weather is unfavorable, the instructor will schedule indoor laboratory exercises. Two contact hours (Laboratory).

### **ATF -- Aviation Technology Flight**

#### **ATF 1000 Basic Flight I 3 cr.**

Corequisite: Federal Aviation Administration (FAA) Class

3 Medical Certificate/Student Pilot License. It is strongly recommended that ATT 1100 (PRIVATE PILOT GROUND SCHOOL) be completed prior to starting this course, which consists of the off-campus instruction and flight training necessary for the student to accomplish a first solo flight in an airplane. The FCCJ instructor will assist the student in selecting the flight school and will screen the selected school and flight instructor on the student's behalf. The FCCJ instructor will counsel the student on the challenges involved in flight training, and will participate in periodic progress checks with the student and flight instructor. In addition, the FCCJ instructor will be available to the student for individual assistance. The cost to the student for the off campus-flight training required to complete this course will be approximately \$600 in addition to FCCJ tuition. The stages the student will progress through in achieving a high degree of flying proficiency in basic flight maneuvers are: Pre-Solo, Supervised Solo, Basic Flying Techniques, and Solo Practice. Requires FCCJ instructor approval to register. Three contact hours: one lecture; two laboratory.

**ATF 1100 Basic Flight II 3 cr.**

This course is a continuation of ATF 1000 and consists of the off-campus instruction and flight training required to complete the FAA Private Pilot Practical Test (Flight Check). At the completion of this course, the student will have earned the FAA Private Pilot's Certificate. The cost to the student for the off campus flight training required to complete this course will be approximately \$2,000 in addition to FCCJ tuition. 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. Requires FCCJ instructor approval to register. Three contact hours: one lecture; two laboratory.

**ATF 2200 Instrument Flight (T) 3 cr.**

Prerequisite: FAA Private Pilot's Certificate. It is strongly recommended that ATT 1120 (INSTRUMENT PILOT GROUND SCHOOL) be completed prior to beginning this course, which consists of off campus instruction and flight training required to achieve the FAA Instrument Rating. The FCCJ instructor's role in this training is the same as ATF 1000. The cost to the student for the off campus flight training will vary according to the student's total flight hours, but may be substantially reduced by the student taking AIO 0020 ADVANCED INSTRUMENT TRAINING, a non-credit instrument training course utilizing FAA approved ATC-610K Flight Simulators. 20 hours of this course's simulated instrument flight time may be credited toward the experience requirements of the FAA Instrument Rating with a potential savings of about \$600. The student will learn the instrument rules and procedures required to pass the FAA Instrument Rating Practical Test (Flight Check) and will satisfy the course requirements by obtaining the Instrument Rating. Requires FCCJ instructor approval to register. Three contact hours: one lecture; two laboratory.

**ATT -- Aviation Technology Theory**

**ATT 1100 Private Pilot Ground School 3 cr.**

This course, consisting of classroom instruction in prepara-

tion for FAA Private Pilot 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.

**ATT 1120 Instrument Rating Ground School 3 cr.**

Prerequisite: FAA Private Pilot Certificate. This course, a preparation for FAA Instrument Pilot Written Examination, reviews 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.

**ATT 1810 Environment of the Air Traffic Controller 3 cr.**

This course presents a candid look at the air traffic controller's language, tools, and profession. Three contact hours.

**ATT 2841 The Air Traffic Control Tower 3 cr.**

This course includes 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.

**ATT 2842 Approach Control 3 cr.**

This course consists of the 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.

**ATT 2843 Air Route Traffic Control Center 3 cr.**

This course consists of 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.

**ATT 2845 Radar/Computer Interface 3 cr.**

This course consists of the history of the impact of radar and its impact on the air traffic system, the advent of the computer and an introduction to the computer/radar interface. Three contact hours.

**ATT 2851 The Flight Service Station 3 cr.**

This course presents 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 -- Aviation Management**

**AVM 2941 Facility Internship/Flight Safety 4 cr.**

This course is designed to present an analysis of factors and procedures relating to Aviation Safety Programs, accident investigations/ analysis, physiological/psychological human factors and the effect of weather. The course includes familiarization with the Air Traffic Control System via on-site orientation visits to Flight Service Stations, Control Towers, Approach Control Facilities, Air Route

Traffic Control Centers, Weather Centers and Radar Sites. Four contact hours: one lecture three laboratory.

## **BAN – Banking**

### **BAN 1004 Principles of Bank Operation 3 cr.**

This course touches on nearly every aspect of banking, providing a comprehensive introduction to the diversified services and operations of the banking industry today. The history, evolution and trends of banking are explored as well as the documents, language, and services of banking. Three contact hours.

### **BAN 1700 Financing Business Enterprise (T) 3 cr.**

The student may benefit by taking ACG 1003 or ACG 2001 before enrolling in BAN 1700. This course emphasizes the difference between lending and investing, and the fact that investing in a corporation and financing a corporation are different aspects of the same subject. The course presents the material from the viewpoint of the corporate treasurer who must safeguard the financial future of the corporation. Three contact hours.

### **BAN 2411 Savings and Time Deposits 3 cr.**

This course reflects a knowledge of the historical development of savings institutions and an awareness of the basic 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. This course reviews different types of financial savings in order to describe the system of financial flows of income to capital investment. Three contact hours.

### **BAN 2501 Money and Banking (T) 3 cr.**

Prerequisite: Economics (recommended but not required). This course provides the student with the key concepts, theories, and processes that link money and banking to the workings of the U.S. economy. The role money and the money supply play in the economy and the role the banks play as money creators are explored in this course. Financial intermediaries, bank operations, the Federal Reserve, tools of monetary and fiscal policy, monetary theory, and international banking are all topics covered in Money and Banking. Three contact hours.

## **BCN -- Building Construction**

### **BCN 1001C Building Construction 3 cr.**

This course introduces the student to materials and methods used in building construction. This course also includes the analysis and evaluation of their adaptation in the construction of residential, commercial, and small industrial buildings. Three contact hours.

### **BCN 2614C Planning and Estimating 3 cr.**

Prerequisites: BCN 1001C, ETI 1421C. This course consists of a study of fundamental planning and a step-by-step method for preparing a quantity survey. The subjects covered in the course include job requirements, costs of construction operations, and critical path method (CPM's) of scheduling and preparing estimates in accordance with

the C.S.I. format. Four contact hours: two lecture; two laboratory.

## **BCT -- Building Construction Trades**

### **BCT 1001 Quantitative Methods for Building Trades 2 cr.**

This course provides the basic mathematical skills necessary for a career in the building trades. While focusing on important industrial applications, this course reviews the fundamental skills that are essential to success in all trades. Two contact hours.

### **BCT 1042 Construction Cost Estimating 3 cr.**

Prerequisite: BCT 1001. This course is a study of the classification of work phases, quantity survey techniques, and cost estimating applied to simple construction projects. Three contact hours.

### **BCT 1043 Blueprint Reading II 2 cr.**

Prerequisite: BCT 1113. This course, a continuation of BCT 1113, focuses on heavy commercial and industrial construction prints. Topics include specifications, topographies, profiles, surveys, maps, and plans. Two contact hours.

### **BCT 1081 Construction Methods and Materials 3 cr.**

This course provides an in-depth study of building materials and introduces building terminology and method of construction, with emphasis placed on site work, concrete, masonry, metal, wood, plastic, thermal moisture protection, and finishes. The topics presented will focus on characteristics of the materials and products regarding their strength, heat and flow, weathering qualities and how these will affect their use in construction projects. Three contact hours.

### **BCT 1113 Blueprint Reading I 3 cr.**

This course teaches the fundamentals of blueprint reading and sketching common to all construction trades. The course covers plans, elevations, shapes, details, and views in sections. Three contact hours.

### **BCT 1114 Concrete Form Construction 3 cr.**

Prerequisite: SUR 1101C. 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. Four contact hours (theory/laboratory).

### **BCT 1132 Construction I 3 cr.**

Prerequisite: BCT 1081. This course is a study of the structure of steel and wood framed buildings, with emphasis on sill, joist, wall, bridging, bracing and sheathing. This course requires classroom and field/site work with construction of full or scale sized models required. Four contact hours: three lecture hours; one laboratory hour.

### **BCT 1134 Construction II 3 cr.**

Prerequisite: BCT 1132. This course, a continuation of



Construction I, focuses on roof construction, style, types and combinations. Attention is directed towards rafter and truss construction, sheathing, flashing and finishing through classroom and field work with construction of full-size or scale models. Four contact hours: three lecture hours; one laboratory hour.

**BCT 1501 Introduction to Plumbing 3 cr.**

This course familiarizes the student with the basic principles and definitions relating to the plumbing trade. The course includes instruction in related math, hand and power tools, basic blueprints, plumbing materials and fittings. Six contact hours: three lecture hours; three laboratory hours.

**BCT 1710 Energy Efficient Construction 3 cr.**

This course provides an overview of energy use in buildings; including 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 1805 Construction Scheduling 2 cr.**

Prerequisite: BCT 1081. This course is a study in the orderly flow of construction projects, through a well planned scheduled approach with emphasis on the CPM, PERT and diagram methods of scheduling. Two contact hours.

**BCT 2152 Construction III 3 cr.**

Prerequisite: BCT 1134. This course is a continuation of Construction II. The course focuses on exterior finishing methods and presents floor, ceiling, wall, door, window and stair finishes through classroom and field work with construction of full-size or scale models. Four contact hours: three lecture hours; one laboratory hour.

**BCT 2153 Construction IV 3 cr.**

Prerequisite: BCT 2152. Corequisite: BCT 2804. This course, a continuation of Construction III, focuses on interior finishes and includes instruction in floors, walls, moldings, doors, windows, cabinets and stairs. Four contact hours: three lecture hours; one laboratory hour.

**BCT 2804 Construction Contracting 2 cr.**

Corequisite: BCT 2153. This course is an in-depth study of the contractual relationship between the parties involved in building construction contracting. This course describes and identifies specifications, bonds, insurance, bidding, awarding, and subcontracting, types and conditions. Two contact hours.

**BOT -- Botany**

---

**BOT 1010C Botany (T) 4 cr.**

An evolutionary survey of the plant kingdom, this course emphasizes the principles which are applicable to all forms of plant life. Six contact hours: three lecture hours; three laboratory hours.

**BOT 2153C Local Flora (T) 4 cr.**

Prerequisite: BOT 1010C or permission of instructor. Survey of local vascular flora and local communities (North-east Florida), and evolutionary relationships of vascular

plants. Laboratory work will emphasize field work including collecting and identifying vascular plants. Six contact hours: three lecture hours; three laboratory hours.

**BRC -- Banking: Related Courses**

---

**BRC 2301 Foundation and Structure of Credit Unions (T) 3 cr.**

This course contains the historical background and philosophy of the credit union movement and clearly portrays the structure and function of the credit union. The course emphasizes the need for ethical patterns and behavior and examines the relationships in the credit union and professionalism. Three contact hours.

**BSC -- Biological Science - Introductory**

---

**BSC 2010C Principles of Biology I (T) 4 cr.**

This course, an introduction to the Principles of Biology, includes studies of cellular organization, genetics, and evolution. This course fulfills the General Education Requirements and the laboratory requirement needed by many students who plan to transfer to a four-year institution. Five contact hours: three lecture hours; two laboratory hours.

**BSC 2011C Principles of Biology II (T) 4 cr.**

Prerequisite: BSC 2010C. This course, a continuation of BSC 2010C and recommended for science students transferring to a four year institution, consists of a study of the systematics of life forms and a required laboratory experience to reinforce subject matter. Five contact hours: three lecture hours; two laboratory hours.

**BUL -- Business Law**

---

**BUL 2100 The Legal Environment of Business (T) 3 cr.**

Prerequisite: Suggested GEB 1011. This course is an introduction to law as it relates to and impacts upon the operation of business. Consideration is given to the Uniform Commercial Code, social forces, governmental regulations, administrative agencies, international law, criminal law, torts, property law, consumer protection, and environmental law. Three contact hours.

**BUL 2112 Business Law (T) 3 cr.**

Prerequisite: BUL 2100. This course covers advanced subjects in business law with emphasis on sales, contracts, and commercial paper. These subjects will be helpful to students preparing for professional certification in areas such as accounting and real estate. Three contact hours.

**CCJ – Criminology and Criminal Justice****CCJ 1010 Introduction to Criminology (T) 3 cr.**

The course provides a survey of deviant behavior as related to the concept and definition of crime, of the concept and purposes of the law, of the measurement and causes of crimes, and of societal reactions to criminal behavior, from historical through contemporary periods. Three contact hours.

**CCJ 1020 Introduction to Criminal Justice (T) 3 cr.**

This introduction to the philosophical and historical backgrounds of law enforcement includes the study of the organization, purpose, functions and processes of law enforcement and, private security operations, privatization of correctional institution and other agencies involved in the administration of criminal justice in the United States. Three contact hours.

**CCJ 1030 Man, Crime, and Society (T) 3 cr.**

This course consists of 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, Evidence, and Procedure (T) 3 cr.**

This course consists of the 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 (T) 3 cr.**

With emphasis on career orientation, this course examines the total correctional process from law enforcement through the administration of justice, probation, prisons and correctional institutions, and parole. Three contact hours.

**CCJ 1400 Police Administration (T) 3 cr.**

This course presents the 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. Three contact hours.

**CCJ 1401 Police Operations 3 cr.**

This course teaches the theory and methods of police operations. The course includes information concerning the structure, function, and process of the patrol unit, the traffic administration unit, the criminal investigations unit, the intelligence and vice units and the juvenile investigation unit. Three contact hours.

**CCJ 2230 Criminal Evidence and Procedure (T) 3 cr.**

This course consists of the 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 (T) 3 cr.**

This study of the United States and Florida Constitutions presents an in-depth analysis of constitutional law with emphasis in areas of arrest, search and seizure, interrogation, self-incrimination, and related topics of interest to law enforcement. The course also includes special emphasis on authority and limitations on police under the "Bill of Rights." Three contact hours.

**CCJ 2330 Probation, Pardon, and Parole (T) 3 cr.**

This course examines, as community based correctional programs, probation as a judicial process and parole as an executive function. The course also reviews the use of pardons. Three contact hours.

**CCJ 2340 Treatment Techniques and Practices (T) 3 cr.**

This course evaluates the basic principles of the techniques of changing attitude and behavior. The course also reviews the individual and group approaches to counseling. Three contact hours.

**CCJ 2360 Advanced and Contemporary Issues in Corrections (T) 3 cr.**

This course describes and evaluates 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. Three contact hours.

**CCJ 2500 Juvenile Delinquency (T) 3 cr.**

This course presents the major issues of crime causation, rehabilitation, and juvenile delinquency participation among the lower, middle, and upper social classes. The course also covers the process of handling juvenile delinquents from confrontation with authorities, to detention, to release and aftercare. Three contact hours.

**CCJ 2930 Special Topics/Seminars - Criminology (T) 3 cr.**

Each student in this course chooses a critical issue in the contemporary law enforcement system to analyze. This analysis provides ideas for improvement which are then shared and critiqued in class. Three contact hours.

**CCJ 2933 Special Topics - Corrections (T) 3 cr.**

This course includes 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.

**CET – Computer Engineering Technology****CET 2112C Introduction to Digital Electronics (T) 3 cr.**

Prerequisite: EET 2121C. This is an introductory course covering solid-state digital circuits, number systems, logic gates, digital codes, Boolean algebra, Karnaugh mapping,

and combinational logic. This course requires laboratory participation. Four contact hours: two lecture hours; two laboratory hours.

**CET 2113C Computer Logic Circuits 3 cr.**

Prerequisites: CET 2112C, EET 2119C. This course, a study of computer circuits and systems, includes the following topics: flip-flops and counters, registers, arithmetic units, computer memories, D/A and A/D conversions. The course also covers digital integrated circuits and introduction to microprocessors. Four contact hours: two lecture hours; two laboratory hours.

**CET 2122C Microprocessors 3 cr.**

Prerequisite: CGS 2020. Corequisite: CET 2113C. This course consists of the fundamentals of programmable logic devices: the microprocessor, peripheral input/output devices, and analog/digital interface devices. The course also covers the principles common to all modern microprocessors and machine-level programming. Four contact hours: two lecture hours; two laboratory hours.

**CET 2186C Computer Peripherals and Interfacing 3 cr.**

Prerequisites: CET 2113C, CET 2122C. This course is a study of the interrelationship between the computer control processing unit and peripheral input/output devices, with emphasis on interfacing considerations between the C.P.U. and series/parallel terminals, general troubleshooting and routine maintenance procedures common to the computer industry as an integral part of the course. Four contact hours: three lecture hours; one laboratory hour.

**CGS -- Computers in General Studies**

---

**CGS 1000 Microcomputers in Business: A Survey (T) 3 cr.**

This course is an indoctrination for users and/or operators who will apply microcomputers to transaction processing, accounting, operations, and financial reporting in business situations. The course provides lab experience with actual microcomputers and application packages. Experience is provided in which microcomputers are used as a stand-alone business tool, as intelligent terminals within distributed processing systems, and as executive tools for data based decision support. Four contact hours: three lecture; one laboratory hour.

**CGS 1060 Introductory Computer Concepts (T) 3 cr.**

This course, intended for individuals with no previous computing experience, includes the history of computers, a survey of how computers are used today, the basic components of computers and computer terminology, elementary problem solving using a high-level computer language, and laboratory experiences using applications software. A study of information systems and computer careers completes the course. Four contact hours: three lecture hours; one laboratory hour.

**CGS 1061 Introduction to IBM Personal Computers and DOS 1 cr.**

This five-week course is aimed at individuals who wish to master use of personal computers for personal productivity and enjoyment. The course is directed toward novices, first time owners of personal computers, and persons who would like to learn more about their computer. Covered in the course are topics such as care and handling of hardware and peripherals, the disk operating system and its utilities, programming in BASIC language, and word processing. The course is oriented toward use of the IBM PC and IBM XT computers. Four contact hours: three lecture hours; one laboratory hour.

**CGS 1510 Introduction to Spreadsheet Concepts 1 cr.**

This course is designed for individuals who wish to master and use software for spreadsheet operations. The course is directed toward novices, first time owners of personal or business computers, and persons who would like to learn more about spreadsheet software. Covered in the course are topics such as the history and development of spreadsheet software, spreadsheet design and construction, and the command set for construction of business spreadsheets. Twenty contact hours.

**CGS 1511 Advanced Spreadsheet Concepts 2 cr.**

Prerequisites: CGS 1510 or demonstrated experience with spreadsheet software. This course is designed for individuals who wish to build on their prior knowledge of spreadsheet operations with such advanced topics as spreadsheet database, graphics, and macros. The course is directed toward executive secretaries, administrative assistants, managers, and executives with the need to perform spreadsheet activities with financial applications. Activities in the course include constructing advanced financial spreadsheets, printing graphs from spreadsheets, searching and sorting spreadsheet databases, and automating spreadsheet operations with macro programs. Forty contact hours.

**CGS 1540 Introduction to Data Base Concepts 1 cr.**

This five-week course introduces individuals to basic models and capabilities of standard data base management systems packages. Data base roles and advantages will be explained. Experience within this course is centered around data base programs that run on microcomputers. A series of data base application projects are designed to build familiarity with creating, loading, maintaining, and updating the data base. Conducting data base queries, and building data base reports are covered. Four contact hours: three lecture hours; one laboratory hour.

**CGS 1541 Advanced Data Base Concepts (T) 2 cr.**

Prerequisite: CGS 1540; or working knowledge of data base software. This ten-week course provides individuals with basic models and capabilities of standard data base management systems packages. Data base roles and advantages will be explained. Experience within this course



is centered around data base programs that run on micro-computer. A series of data base application projects are designed to build familiarity with creating, loading, maintaining, and updating the data base. Conducting data base queries and building data base reports are covered. This course includes programming in a fourth generation data base language. Projects in the course relate to construction of integrated business systems. Four contact hours; three lecture hours; one laboratory hour.

**CGS 1570 Microcomputer Application Software (T) 3 cr.**

Prerequisite: Knowledge of the keyboard recommended. This course is intended for students with no previous experience in data processing. It orients the student to DOS, word processing software, electronic spreadsheet software, data base software, and business graphics software to solve common problems of the automated office. Four contact hours; three lecture hours; one laboratory hour.

**CGS 1571 Management Overview of Microcomputer Software 1 cr.**

This five-week course is designed for management personnel who wish to gain an overview and experience with the kinds of software which can increase productivity in the business environment. The topical coverage includes word processing, electronic spreadsheets, data base management systems, business graphics, project management, and communications software. No previous experience with computers is necessary. Emphasis is placed on reviewing, evaluating, and discussing theoretical applications of software. Course participants will gain the knowledge and ability to select microcomputer software for business applications. Four contact hours; two lecture hours; two laboratory hours.

**CGS 1580 Introduction to Desktop Publishing (T) 3 cr.**

Recommended prerequisite: Working knowledge of IBM or Macintosh microcomputers or compatibles, and experience with word processing software. This course is designed for persons who wish to develop desktop publishing skills. Persons who will benefit from this course include administrative assistants involved in corporate report production, secretaries involved in newsletter production, individuals in the advertising and printing industries, corporate personnel involved with printed communications, and writers. The course includes skills leading to the development of newsletters, brochures, technical papers, and annual reports. Four Contact Hours: three lecture hours; one laboratory hour.

**CGS 2020 Computer Concepts (T) 3 cr.**

This course is an introduction to the computer. The course teaches computer literacy, emphasizing concepts of hardware and software including programming demonstration on the Apple II and Apple IIc computer. The course includes a survey of the central processing units and its functional component, auxiliary storage devices and functions, input and output units, the program development

process, programming languages, operating systems, and data communications. The course includes a demonstration of programming in machine language. Three contact hours.

**CGS 2100 Advanced Microcomputer Business Applications (T) 3 cr.**

Prerequisites: CGS 2020 and CGS 2570; or equivalent work experience, and ACG 2001; or equivalent work experience. This course is a skill development course in which students will process transactions, build files, maintain files, and produce outputs on microcomputers. Students work with software packages and input documents from which applications are implemented. Specific application instruction includes order entry, invoicing, accounts receivable, payables, purchasing, financial reporting, and projections using spreadsheets. Four contact hours; three lecture hours; one laboratory hour.

**CGS 2470 Computer Aided Drafting and Design (T) 3 cr.**

Prerequisite: ETD 1100. This course provides a student with a general understanding of Computer Aided Drafting and Design operations. The student will acquire 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 will 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.

**CGS 2512 Spreadsheet Concepts and Practices 3 cr.**

This course is designed for individuals who wish to master and use spreadsheet software. The course is directed toward novices, first time owners of personal or business computers, and persons who would like to learn more about spreadsheet software and operations. Covered in the course are the history and terminology of spreadsheet software, spreadsheet design and construction, and uses of spreadsheet to solve financial applications. Also covered are spreadsheet graphics, spreadsheet data base, and spreadsheet automation. The course requires use of the IBM personal computers or compatibles. Four contact hours: three lecture hours; one laboratory hour.

**CGS 2542 Data Base Management Concepts and Practices (T) 3 cr.**

This course is aimed at familiarizing individuals with the basic models and capabilities of standard data base management systems (DBMS) packages. Data bases, their roles, and advantages will be explained. Experience within this course is centered around data base programs that run on microcomputer. The capabilities of the three major data models: hierarchical, network, and relational will be covered. A series of data base application projects on micro-computer are designed to build familiarity with creating, loading, maintaining, and updating the data base. Conducting data base queries, and building data base reports are covered. This course includes advanced programming in a fourth generation data base language. Four contact hours; three lecture hours; one laboratory hour.

## **CHD -- Child Development**

---

### **CHD 1110 Infant and Toddler Care I (Development) 3 cr.**

This course introduces infant and toddler care workers to the stages of human development from birth to three years. The course also covers the impact of health, parenting, environment, nutrition, mental health, and self-esteem on normal and abnormal development. Three contact hours.

### **CHD 1220 Child Growth and Development I (T) 3 cr.**

This course is an introductory study of physical, social, emotional, and cognitive development; conception through age six. The course stresses acquisition of skills in child observation and recording, and behavior management. It includes Module IV of the HRS Child Care Worker Training Course. Three contact hours.

### **CHD 1710 Child Growth and Development II (T) 3 cr.**

Prerequisite: CHD 1220. This course focuses on the young differently-abled child; children in crisis; working with families; behavior management; nutrition, health, and safety in the early childhood classroom. The course includes Modules II and III of the HRS Child Care Worker Training Course. Three contact hours.

### **CHD 2120 Infant and Toddler Care II (Education) 3 cr.**

Prerequisite: CHD 1110. This course introduces infant and toddler care workers to educational strategies for children from birth to three years. The course also covers minimum standards, classroom management, teacher preparation, assessment, discipline and parent participation. Three contact hours.

## **CHI -- Chinese**

---

### **CHI 1000 Conversational Chinese (T) 3 cr.**

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

## **CHM -- Chemistry**

---

### **CHM 1010 Introduction to Chemical Problem Solving (T) 2 cr.**

Corequisite: MAT 1033 or a satisfactory score on algebra placement test. This course is for students who need more skill and experience with applications of the mathematics required in general chemistry. It is recommended for students with weak backgrounds in chemistry and applied algebra. Two contact hours.

### **CHM 1020 Chemistry for Liberal Arts (T) 3 cr.**

The student will benefit by taking high school algebra or MAT 0024 prior to enrolling in this course. This course, designed to meet the general education requirements for the non-science major, 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 1025C Introduction to General Chemistry (T) 4 cr.**

Corequisite: MAT 1033. This course is an introduction to the concepts of inorganic chemistry including structures of matter, atomic theory, nomenclature, bonding, gases, solutions, equilibrium, and acids and bases. This course is for students who have had no previous chemistry and plan to major in science, engineering, premedicine, and pharmacy. Six contact hours: four Lecture/Discussion hours; two laboratory hours.

### **CHM 1030C Introductory Chemistry I (T) 4 cr.**

The student will benefit by taking high school algebra or MAT 0024 prior to enrolling in this course. This course is an 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 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 1031C Introductory Chemistry II (T) 4 cr.**

Prerequisite: CHM 1030C. This course is a continuation of CHM 1030C with an introduction to organic chemistry. Six contact hours: three class hours; one three-hour laboratory.

### **CHM 1032C Principles of General Chemistry (T) 4 cr.**

The student will benefit by taking high school algebra or MAT 1033 prior to enrolling in this course. This course is an introduction to the concepts of inorganic chemistry including structures of matter, atomic theory, nomenclature, bonding, bases, and introduction to organic chemistry. This course is for students who have had no previous chemistry and plan to major in Dental Hygiene, Medical Technology, Nursing, and Health Related fields. Six contact hours: four Lecture/Discussion hours; two laboratory hours.

### **CHM 1045C General Chemistry and Qualitative Analysis I (T) 4 cr.**

Prerequisite: One year of high school chemistry and two years of high school algebra or grade of C or better in CHM 1025C or 1032C. This course, designed to introduce the student to modern chemical concepts, 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 meets 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 (T) 4 cr.**

Prerequisite: Grade of C or better in CHM 1045C. This course, a continuation of CHM 1045C, stresses chemical equilibrium, chemical kinetics, electrochemistry, oxidation-reduction, and selected families of metals and non-metals. Laboratory work includes studies of ionic equilibrium in aqueous solutions and semi-micro qualitative analysis. Six contact hours; three lecture hours; three laboratory hours.

**CHM 2200 Survey of Organic Chemistry (T) 3 cr.**

Prerequisite: CHM 1025C. This course is intended as an introduction to organic principles for any student needing background preparation in organic chemistry. This course will not satisfy the requirements for majors requiring one year organic lab chemistry. Topics to be treated include bonding/structure, reactivity, organic groups with emphasis on nomenclature, structure, and properties. Three contact hours.

**CHM 2200L Laboratory for Organic Chemistry (T) 1 cr.**

Corequisite: CHM 2200. This is an introductory laboratory course to be taken simultaneously with CHM 2200, Introduction to Organic Chemistry. This course will cover the fundamentals of organic chemistry laboratory practices. Three contact hours (laboratory).

**CHM 2205C Introductory Organic/BioChemistry (T) 4 cr.**

Prerequisite: CHM 1030C. This course is an introduction to organic chemistry of functional groups and a survey of the biochemistry of proteins, carbohydrates, lipids, and nucleic acids. Six contact hours; three lecture hours; three laboratory hours.

**CIS -- Computer and Information Systems**

**CIS 1321 Computer Systems Development (with High Level Tools) (T) 3 cr.**

Prerequisites: CGS 1060 and CGS 1570, or equivalent work experience. This course surveys established and evolving methodologies for the development of business-oriented computer information systems. Students are exposed to an overview of a process, or structured, approach to the definition of needs, creation of specifications, and implementation of new systems. Prototyping and fourth generation software tools are used to design and develop business systems. Four contact hours; three lecture hours; one laboratory hour.

**CIS 1400 Data Processing Workshop (T) 3 cr.**

Prerequisite: CGS 1060. This course provides the opportunity for students to gain actual experience operating a medium-sized computer system in a production environment. This experience will be supplemented with field trips. Topics include organization of data processing departments, functional characteristics of peripheral devices,

operating systems, and job control. Eight contact hours; three lecture hours; five laboratory hours.

**CIS 2300 Command-Level CICS Programming 3 cr.**

Prerequisites: COP 2120 and COP 2540. This course provides training in Customer Information Control Systems (CICS), a general purpose data base and data communication interface between an operating system and application programs. Students will design, code, test, and debug programs in COBOL for realtime applications. Four contact hours; three lecture hours; one laboratory hour.

**CIS 2321 Information Systems (T) 3 cr.**

Prerequisite: COP 2540. This course, designed to introduce the student to the fundamental concepts of information systems, emphasizes current system 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. The course also covers examples of applications and various types of processing systems including batch, online, and distributed systems 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 3 cr.**

This introductory course, designed to acquaint future and present police supervisors with an understanding of the various functions of supervision, examines the supervisor's responsibilities and assignments. The general topical areas include techniques of working with people, communications, personnel selection and training, motivation, principles of organization and management, disciplinary methods, and performance ratings. Three contact hours.

**CJT -- Criminal Justice Technology**

**CJT 2100 Fundamentals of Criminal Investigation (T) 3 cr.**

Criminal Investigation covers general investigative principles and techniques used by law enforcement. This fundamental course in the most important phases of criminal investigation deals with the following branches of crime: 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 Criminal Investigation II 3 cr.**

With Criminal Investigation I as a basis, Criminal Investigation II is an introduction to the scientific aspects of investigation known as criminalistics with emphasis on crime scene techniques in specialized areas such as homicide. Special attention afforded in acquainting students with modern scientific services available in the crime laboratory including fingerprints, ballistics, hairs, fibers, and other material found at the crime scene. Three contact hours.



## **CNM – Computational/Numerical Methods**

### **CNM 1005 Data Processing Mathematics (T) 3 cr.**

Prerequisites: CGS 1060 and MAT 0002 or satisfactory score on mathematics placement test. This a foundation course for Computer and Information System majors. Topics include: binary, octal, and hexadecimal numbers; fixed point storage and arithmetic; computer codes; packed decimal arithmetic; the real number system; approximations; accuracy and precision; scientific notation; floating point notation and storage; and logical forms and operation. Computer laboratory exercises will be used to demonstrate the topics and techniques involved. Four contact hours; three lecture hours; one laboratory hour.

## **COA -- Home Economics: Consumer Affairs**

### **COA 1100 Consumer Decisions (T) 3 cr.**

This course studies 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, taxes, consumer protection, and the consumer movement. Three contact hours.

## **COP -- Computer Programming**

### **COP 1000 Introduction to Programming and Algorithm Design (T) 3 cr.**

Corequisite: CGS 1060. This is an essential first course for data processing majors. It will introduce the fundamentals of computer usage, covering topics such as editor functions, files (batch and interactive), 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 3 cr.**

Prerequisite: CGS 1060. RPG (Report Program Generator) is a problem oriented programming language designed to obtain information from single or multiple files, 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 testing on the College's computer system, and (c) provide operational documentations. Four contact hours; three lecture hours; one laboratory hour.

### **COP 1341 Introduction to UNIX Operating System 2 cr.**

This ten-week course requires substantial lab time on microcomputers to learn about and apply the UNIX operating system functions and commands that are necessary in a working environment. Students will review the basics of initializing diskettes, and move on to programming language, copying, file management, backup and recovery, sort, and other routines. Operating systems topics include multi-user systems, data communications, and establish-

ing interfaces involving microcomputers, minicomputers, and mainframes. Four contact hours: three lecture hours; one laboratory hour.

### **COP 2120 COBOL Programming (T) 3 cr.**

Prerequisites: CGS 1060 and COP 1000. 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 (T) 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 2170 Programming in BASIC (T) 3 cr.**

Prerequisites: CGS 1060 and one of the following: MTB 1321, COP 1000, MAT 1033. This beginning level computer course uses the BASIC (Beginner's All-purpose Symbolic Instruction Code) language in an interactive environment. Students will solve a variety of problems drawn from the areas of business, engineering mathematics, and simulation. Four contact hours; three lecture hours; one laboratory hour.

### **COP 2200 FORTRAN Programming (T) 3 cr.**

Prerequisites: CGS 1060 and one of the following: MTB 1321, CNM 1005, MAT 1033. This is a comprehensive study of a scientific programming language which is also used in business applications in batched-job processing environments. File manipulation, including disk, files, and efficient programming techniques, interactive programming and simulation are emphasized. Lab problems will include business, engineering, and scientific applications. Four contact hours; three lecture hours; one laboratory hour.

### **COP 2210 Introduction to Pascal Programming (T) 3 cr.**

Prerequisites: COP 1000; or CGS 1060 and MAT 1033. This course will instruct the student in the fundamentals of Pascal program development including: algorithm design, program definition, coding, testing, and debugging. Modularity will be learned, using programmer-defined functions and procedures. Pascal was designed to be easily learned and read, and to encourage structured programming. It contains numerous data types and control structures, and is adaptable to different computers. Students will develop pascal programs to solve "real-world" problems. Four contact hours; three lecture hours; one laboratory hour.

**COP 2400 Basic Assembly Language Programming (T)** 3 cr.

Prerequisites: CGS 1060 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 ALP. Students will analyze business problems involving sequential files; develop logic flowcharts; translate flowcharts into IBM System 360-370 DOS Assembler Language Codes; incorporate job control statements to form a job deck; and test, debug, and document their computer solutions to business problems. Four contact hours: three lecture hours; one laboratory hour.

**COP 2540 Data Management and Job Control Language (T)** 3 cr.

Prerequisite: COP 1000. This course consists of a study of the data organizations, access methods, and job control language as well as the use of utility programs as components of an application system to build and maintain files. Topics will also include an introduction to data bases and data base management systems. Four contact hours: three lecture hours; one laboratory hour.

**COP 2610 Advanced Computing and Programming Systems (T)** 3 cr.

Prerequisite: COP 2120 and proficiency in computer programming. This course is designed to help students with programming experience to write more efficient programs through a closer examination of hardware and system software. Topics include computer architectures, operating systems, language translators, and data communication/teleprocessing. Four contact hours: three lecture hours; one laboratory hour.

**COP 2612 Microcomputer Operating Systems Concepts (T)** 3 cr.

Prerequisites: CGS 1060 and CGS 1570, or equivalent work experience. This course requires substantial lab time on microcomputers to learn about and apply the operating system functions and commands that are valuable or necessary in a working environment. Students will review the basics of initializing diskettes, and move on to programming language, copying, file management, backup and recovery, sort, and other routines. Operating systems reviewed in this course are MS DOS and UNIX. Other topics include multi-user systems, data communications, and establishing interfaces involving microcomputers, minicomputers, and mainframes. Four contact hours: three lecture hours; one laboratory hour.

**CPO – Comparative Politics****CPO 2002 Introduction to Comparative Government (T)** 3 cr.

This course consists of a comparison of the institutions and the economic systems of capitalism and socialism associated with the political systems of specific countries. Three contact hours.

**CRW – Creative Writing****CRW 2000 Imaginative Writing (T)** 3 cr.

Prerequisite: ENC 1102. This course develops the student's capacity for imaginative writing in prose and/or poetry. The course includes critical discussion of student's work and of selected literary techniques and individual conferences. Three contact hours.

**CTE – Clothing and Textiles****CTE 1310C Basic Clothing Construction (T)** 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 course also includes the selection of suitable accessories. Four contact hours: two lecture hours; two laboratory hours.

**CTE 1340C Advanced Clothing Construction (T)** 3 cr.

Prerequisite: CTE 1310C. This course presents to the participant the problems encountered in fitted garments construction. The student will exhibit skill in figure analysis, pattern alterations, and advanced clothing construction techniques. Four contact hours: two lecture hours; two laboratory hours.

**CTE 1350C Tailoring I** 3 cr.

Prerequisite: CTE 1310C or the equivalent. This course, 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 (T)** 3 cr.

This course, a study of fabrics used for clothing and house furnishings, emphasizes fibers, yarns, constructions, designs and finishes that determine qualities and the performance of a fabric. This course also includes the use and care of fabrics and cost factors. Four contact hours: two lecture hours; two laboratory hours.

**CTE 1731C Fashion Illustration** 3 cr.

This course is designed to provide students with the basic skills in sketching the fashion figure and apparel. Emphasis is placed on simple methods of drawing and coloring. Varied media and rendering techniques are explored. Four contact hours: two lecture hours; two laboratory hours.

**CTE 1812 Retail Merchandising (T)** 3 cr.

This is a basic course designed to provide students with an overview of the retailing industry, including organization, operation, environmental influence on the industry, store location, layout, and design, and entrepreneurship. Three contact hours.



**CTE 1821 Merchandising Mathematics (T) 3 cr.**

This course is designed to provide students with an exploration of the financial management of retail stores in terms of dollar and unit figures. Study includes terms, pricing, turnover, shortages, gross margin, buying plan, stock-sales ratio, retail methods of inventory, expenses, profit and loss, and operating statements. Three contact hours.

**CTE 1827 Retail Buying (T) 3 cr.**

Prerequisite: CTE 1812. This course is designed to provide students with an in-depth study of buying functions and techniques. Emphasis will be placed on determining consumer demand as well as planning, selection, controlling, and evaluating purchases. Three contact hours.

**CTE 1840 Merchandising Information 3 cr.**

This course provides the student with the ability to analyze quality of materials, construction, and design of merchandise in all price ranges. Consumer demands and trends will also be studied. Three contact hours.

**CTE 1856 Retail Salesmanship (T) 3 cr.**

This course provides students with an in-depth understanding of the personal selling process. Emphasis will be on successful personal selling techniques, multiple and suggestive selling, and personal service. Three contact hours.

**CTE 2200 Wardrobe Planning and Updating (T) 3 cr.**

This course provides for the development of competency in planning individual and family wardrobes. Factors to consider in purchasing wardrobe items are stressed as well as the care, maintenance, and updating of various wardrobe components. Emphasis will be placed on the psychological and social factors influencing dress and the relationship of physical appearance to clothing selection. Attention will be given to the effectiveness of clothing choices in professional situations. The course includes experiences in the application of elements and principles of design to wardrobe coordination. Three contact hours.

**CTE 2283 Retail Computer Applications (T) 3 cr.**

This course is an examination of the advantages and techniques of computer use in retailing. Emphasis is placed on the applications of computer generated information as a management tool. Three contact hours.

**CTE 2851 Sales Promotion (T) 3 cr.**

This course provides students with an in-depth study of the techniques and methods used for advertising and promotion. Study includes advertising, special events, publicity, fashion shows, and personal selling. Emphasis is placed on cost and effectiveness of the various forms of promotion. Three contact hours.

**CTE 2852 Visual Merchandising (T) 3 cr.**

This course is designed to provide students with technical and practical knowledge needed to create effective merchandise displays. While themes and techniques change regularly, students will learn basics and fundamentals that

can be readily adapted to multiple situations. Practical experience in using various types of equipment is an integral part of this course. Three contact hours.

**CTE 2853 Fashion Show Production 3 cr.**

This course provides an in-depth view of the steps required and decisions necessary to produce a fashion show. Emphasis will be placed on the promotional impact and effectiveness of fashion shows as well as the planning and actual production of a formal fashion show. Three contact hours.

**CTE 2866 Store Planning and Design 3 cr.**

This course provides students with an in-depth analysis of store location and layout factors. Analysis includes factors affecting all aspects of store operation, site selection, leasing considerations, interior space allocations, exterior features, fixturing, store ambience and lighting considerations. Three contact hours.

**CTE 2880 Retail Merchandising Internship (T) 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, emphasizing employment skills. Thirty-three contact hours: one lecture hour; thirty-two hours on-the-job experience.

**DAA -- Dance Activities****DAA 1340 Folk Dance (T) 1 cr.**

This course consists of the exploration and enjoyment of the fundamental steps, positions, and formations of the popular American and ethnic folk and round dances. Two contact hours (activity).

**DAA 1380 Recreational Dance (T) 1 cr.**

This course consists of 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).

**DEA -- Dental Assisting****DEA 1000 History and Jurisprudence of Dentistry 1 cr.**

This course presents a knowledge of the Code of Ethics for dental assistants and the laws which govern the practice of dentistry. The student must have this previous dental experience before taking this course. One contact hour.

**DEA 1120 Science for Dental Assistants 3 cr.**

This course, preceded by anatomy and physiology, includes Oral Pathology -- a knowledge of etiology dental carries control and a familiarity with common periodontal diseases; Pharmacology -- a knowledge of the drugs



commonly used in the dental treatment; the responsibilities in the use of such drugs, and a knowledge of the standards set forth by the Food and Drug Administration of the Department of Health, Education and Welfare; First Aid -- a 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** 2 cr.

This course, designed to teach the dental assistant student expanded duties as permissible by the Florida State Dental Practice Act, will include new procedures as traditional expanded functions are ratified by the Department of Professional Regulations, Board of Dentistry (Chapter 21G-16). This course also includes manipulation of dental materials utilizing dental assisting techniques. Three contact hours: one lecture hour; two laboratory hours.

**DEA 2200 Office Management** 3 cr.

This course develops 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** 5 cr.

This course provides the dental assisting student with 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 operation field. Eight contact hours: two lecture hours; six laboratory hours.

**DEA 2801C Clinical Practice II** 6 cr.

Prerequisite: DEA 2800C. This course, a continuation of Clinical Practice I, consists of two hours of lecture, four hours of laboratory, and eight hours of field experience covering clinical and chairside dental assisting skills. Fourteen contact hours: two lecture hours; four laboratory hours; eight field hours.

**DEA 2802C Clinical Practice III** 3 cr.

Prerequisite: DEA 2801C. This course, a continuation of DEA 2801C, 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** 5 cr.

Prerequisite: DEA 2802C. This course consists of 40 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. Forty contact hours (field). This is a six-week course.

**DEH – Dental Hygiene**

**DEH 1003C Principles of Dental Hygiene** 5 cr.

Principles of Dental Hygiene, offered during the student's first term of the first year of clinical studies, is a basic introductory course to teach the theories and practices in dental hygiene, and a prerequisite to Clinical Dental Hygiene I. 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 1800C Clinical Dental Hygiene I** 6 cr.

Prerequisite: DEH 1003C. 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. This course will also include CPR. Ten contact hours: two lecture hours; eight clinical hours.

**DEH 1802L Clinical Dental Hygiene II** 8 cr.

Prerequisite: DEH 1800C. This course, 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, devotes time to providing oral prophylaxis care for patients, who present varying classifications of prophylaxis needs. The course emphasizes the continuing refinement of the techniques and skills in performing an oral prophylaxis including Gracey curets 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

**DEH 2507C Dental Hygienists Expanded Duties** 2 cr.

This course, designed to teach the dental hygiene students expanded functions as permissible by the Florida State Dental Practice Act, will include new procedures as traditional expanded functions are ratified by the Department of Professional Regulations, Board of Dentistry (Chapter 21G-16). This course will also include manipulation of Dental Materials utilizing dental hygiene techniques. Three contact hours: one lecture hour; two laboratory hours.

**DEH 2602 Periodontics** 2 cr.

This course, designed to give the student a detailed study of the factors involved in periodontal pathology and its etiology reviews in detail the anatomy, physiology, and histology of the periodontium. The course emphasizes diagnosis, prognosis, and treatment of patients with peri-

odontal involvement, and management of patients returning for maintenance care. The course also teaches procedures and techniques for soft tissue curettage, periodontal dressing placement and removal, and suture removal. Two contact hours.

**DEH 2701 Community and Preventive Dentistry 3 cr.**

This course incorporates the principles, practices, methods, and visual aids used in teaching preventive dentistry to the public. Field experiences in elementary schools, public health centers, nursing homes, and centers for the handicapped will be utilized. Four contact hours: two lecture hours; two field hours.

**DEH 2804L Clinical Dental Hygiene III 8 cr.**

Prerequisite: DEH 1802L. This course, a continuation of DEH 1802L, emphasizes the continuing refinement and increased efficiency of clinical skills including complete prophylaxis procedures, radiographs, and management of patients, individual responsibilities, achievement in responsibility toward the community, the profession, and dentistry in general. The student should achieve an advanced level degree of proficiency. Sixteen contact hours (clinic).

**DEH 2806L Clinical Dental Hygiene IV 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 should achieve an exit level degree of proficiency. Sixteen contact hours (clinic).

**DEH 2930 Dental Hygiene Seminar I 2 cr.**

This course, designed to provide a more comprehensive content coverage in all specialties of dentistry, enables the dental hygiene student to become more cognizant of techniques and procedures in dentistry outside the perimeters of dental hygiene. The course consists of discussions 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 2 cr.**

Prerequisite: DEH 2930. Continuing DEH 2930, this course, 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, emphasizes 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 (T) 3 cr.**

This course consists of the study of the development of

the individual throughout the life cycle, including child, adolescent, and adult patterns of behavior, with attention to physical, intellectual, cognitive, personality, and social development. Three contact hours.

**DEP 2102 Child Psychology (T) 3 cr.**

Prerequisite: PSY 1012. This course consists of a developmental study of the normal child, from birth to the adolescent years. The course stresses practical applications with their implications for the parent and teacher, as well as for the evolving individual. Three contact hours.

**DEP 2302 Adolescent Psychology (T) 3 cr.**

Prerequisite: PSY 1012. This course consists of the study of human development in the adolescent years with emphasis on psychological problems. Three contact hours.

**DEP 2401 Adult Psychology (T) 3 cr.**

This course examines the physical, social, intellectual and personal characteristics of the human being during early, middle and late adulthood. The course will investigate key events in adult life, such as marriage, choice of occupation, parenthood, and retirement, along with other developmental tasks and stages. Three contact hours.

**DES -- Dental Support**

**DES 1020C Oral Development 3 cr.**

This course is a comprehensive study of head and neck anatomy, physiology, and histology. Laboratory sessions will be coordinated to include the study of the human dentition and surrounding tissues. Four contact hours: two lecture hours; two laboratory hours.

**DES 1110C Dental Materials and Laboratory 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 course also considers the procedures for purchasing and storage of supplies. Four contact hours: two lecture hours; two laboratory hours.

**DES 1220C Dental Radiology (Dental Assisting/Dental Hygiene) 3 cr.**

This course, 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, 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 2042 Oral Pathology 2 cr.**

This course gives 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 2 cr.**

This course gives the student a detailed study of the



principles, characteristics, actions, reactions, and uses of anesthetics, drugs, medicaments, and preparations used to prevent, control and treat diseases. Two contact hours.

### **DIE -- Dietetic**

#### **DIE 1100 Dietetic Seminar 1 cr.**

This course includes a study of the role of dietetic personnel in health care food systems. This course also includes assigned problems in organization and management of dietary departments and trends in methods of food service in health care facilities. One contact hour.

#### **DIE 1201 Therapeutic Nutrition 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 2013 Principles of Economics I (T) 3 cr.**

This course in macroeconomics presents the foundations of economic analysis, the theory of economic growth, development, and stabilization, current economic issues, and the monetary theory. Three contact hours.

#### **ECO 2023 Principles of Economics II (T) 3 cr.**

Prerequisite: ECO 2013 or consent of professor. This course in microeconomics is a continuation of ECO 2013 and includes a study of the tools for economic analysis, the price theory of the market system, the theory of the firm, the theories of production and distribution and international trade. Three contact hours.

### **EDF -- Education Foundations**

#### **EDF 1005 Introduction to Education (T) 3 cr.**

This introductory course in education assists the student in understanding the American educational system in terms of its development and its present organization. The student is introduced to the problems and the rewards of the profession. Three contact hours.

### **EDG -- Education General**

#### **EDG 2940 Observing and Recording Child Behavior (T) 6 cr.**

Prerequisites: CHD 1220 and EEC 1001. This course is designed for students to observe, record and analyze young children's behavior and pre-school settings. The course includes a two-hour seminar and eight-hours of supervised experiences weekly, in a variety of community child care facilities. Ten contact hours: two lecture hours; eight laboratory hours.

#### **EDG 2941 Supervised Student Participation (T) 6 cr.**

Prerequisites: CHD 1220, CHD 1230, EDG 2940, EEC 1001, EEC 1200, and EEC 1202. This course is designed for students to apply acquired knowledge and skills through

supervised work experiences in child care facilities. The course includes a two-hour seminar and eight hours supervised field experiences weekly. Ten contact hours: two lecture hours; eight laboratory hours.

### **EDP -- Educational Psychology**

#### **EDP 2002 Educational Psychology (T) 3 cr.**

Prerequisite: PSY 1012. This course consists of an in-depth study of the relationships between sound psychology and educational process which will lead to the establishment of proper teaching techniques and to the understanding of personality dynamics of students. Three contact hours.

### **EEC -- Education: Early Childhood**

#### **EEC 1001 Introduction to Early Childhood Education (T) 3 cr.**

This course introduces basic principles and practices involved in guiding the young child. The course includes history and objectives of early childhood programs; child care issues; center licensing standards; and classroom activity planning. The course includes Module I of the HRS Child Care Worker Training Course. Three contact hours.

#### **EEC 1200 Overview of Early Childhood Curriculum I 3 cr.**

Prerequisite: EEC 1001. This course acquaints the student with basic principles and resources for music, art, language arts, and social studies activities for the young child. The course includes teacher planning and methodology. Three contact hours.

#### **EEC 1202 Overview of Early Childhood Curriculum II 3 cr.**

Prerequisite: EEC 1001. This course acquaints the student with basic principles and resources for health, safety, nutrition, mathematics, science, and movement education activities for the young child. The course includes teacher planning and methodology. Three contact hours.

### **EER -- Electrical/Electronics Repair**

#### **EER 1067 Mechanical Devices for Electric 3 cr.**

This course includes the basic laws, principles, and operation of mechanical devices, along with a study of force, work, power, simple machines, friction, gear trains and drives, explained in both classroom and laboratory conditions. Four contact hours: two lecture hours; two laboratory hours.

### **EET -- Electronic Engineering Technology**

#### **EET 1004 Fundamentals of General Electricity 3 cr.**

Designed for the non-electrical engineering technician to provide a general knowledge of electrical phenomena, this survey course of the electrical field covers both direct current and alternating current theory, as well as basic electrical elements. Three contact hours.



**EET 1015C DC Theory and Circuits 3 cr.**

Corequisite: MAC 1104. This course presents the study of 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; Thevenin's Theorem, power, work and energy, series and parallel circuits, magnetism, capacitors, inductors, and measuring instruments devoted to the application of acquired theory. The course emphasizes the proper use of modern electronics measuring equipment. Five contact hours: three lecture hours; two laboratory hours.

**EET 1025C AC Theory and Circuits 3 cr.**

Corequisite: MAC 1114; Prerequisite: EET 1015C. This course consists of the 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 Phasors, Series and Parallel AC Circuits and Networks, Power, Transformers, Resonance, Polyphase Systems and a laboratory experience to reinforce the student's understanding of important theoretical concepts. Five contact hours: three lecture hours; two laboratory hours.

**EET 1035C DC/AC Fundamentals (T) 4 cr.**

This is the first course in the electronics sequence and consists of the introduction to the concepts, laws, and definitions encountered in DC and AC electric circuits. It combines laboratory and classroom work. Five contact hours: three lecture hours; two laboratory hours.

**EET 2119C Amplifier Circuits (T) 3 cr.**

Prerequisite: EET 2121C. This course covers small-signal and power bipolar transistor amplifiers. It also includes coverage of field-effect transistor and vacuum tube amplifier circuits, with required laboratory participation. Four contact hours: two laboratory hours; two lecture hours.

**EET 2121C Introduction to Solid State Electronics (T) 3 cr.**

Prerequisite: EET 1015C. Corequisite: EET 1025C. This is an introductory course covering the principles of operation of solid-state (semiconductor) devices and circuits. Emphasis is on PN junctions, junction diodes, and bipolar transistors with participation in laboratory exercises required. Four contact hours: two lecture hours; two laboratory hours.

**EET 2142C Linear Semiconductor Analysis 3 cr.**

Prerequisite: EET 2119C. 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 course considers in detail Feedback, Frequency Effects, and Voltage Regulation. Four contact hours: two lecture hours; two laboratory hours.

**EET 2324C Communications Electronics I 3 cr.**

Prerequisite: EET 2119C. This introductory course in the specialized field of Communications Electronics includes the fundamental concepts of communications, com-

munications 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.

**EET 2326C Communications Electronics II 3 cr.**

Prerequisite: EET 2324C. This course, a continuation of a two-course sequence in communications electronics, includes the transmission and radiation of signals, transmission lines and antennas, telephone and video systems, and digital communications systems. Four contact hours: three lecture hours; one laboratory hour.

**EET 2940 Biomedical Practicum 3 cr.**

Prerequisites: EET 2142C, EST 2112, EST 2436C. This course, 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, will be conducted at various local hospitals, and will consist of supervised device circuit analysis, troubleshooting training and "on the job" training with practicing BMETs. Eight contact hours: all laboratory.

**EGS -- Engineering Geographical Science****EGS 1130C Descriptive Geometry (T) 3 cr.**

Prerequisite: ETD 1100. The course consists of 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 1400 Introduction to Interpreting (T) 3 cr.**

Prerequisites: SPA 1332 and SPA 1380. Designed primarily to improve and refine interpreting skills through observation and practice, 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. Three contact hours.

**EMS -- Emergency Medical Services****EMS 1059 First Responders: Emergency Care Training 3 cr.**

Designed specifically for the non-medical person who wishes to learn basic life saving skills, this course provides the student with basic skills necessary to save a life, minimize patient discomfort, and prevent further injury. 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: two lecture hours; one laboratory hour.

**EMS 1119 Fundamentals of Emergency Medical Care 6 cr.**

Prerequisites: EMS 1059 or permission of professor. Corequisites: EMS 1119L, APB 2190C. This course, de-

signed to prepare persons for initial employment as an EMT, 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** 2 cr.

Prerequisite: APB 2190C; Corequisite: EMS 1119. This course consists of demonstrations of emergency procedures for life-threatening problems which will be practiced in the College laboratory. Clinical rotation in a local hospital emergency care facility is a requirement for this class. Four contact hours: three clinical hours; one laboratory hour.

**EMS 2231 EMT-Paramedic Phase I** 6 cr.

Prerequisites: EMS 1119, EMS 1119L, APB 2190C; Corequisites: EMS 2231L, APB 2191C. The first of a three-term sequence of instruction for the EMT paramedic, includes the following: the EMT, Human Systems and Patient Assessment, Shock and Fluid Therapy, Respiratory System and Management of Emotional Crisis. Six contact hours.

**EMS 2231L EMT-Paramedic Phase I Lab/Clinical** 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 segment includes an emergency room and psychiatric in-hospital rotation. Laboratory and clinical application of experience are a continuum of EMS 2231. Six contact hours: two laboratory hours; four clinical hours.

**EMS 2232 EMT-Paramedic Phase II** 5 cr.

Prerequisites: EMS 2231, EMS 2231L and APB 2191C. Corequisite: EMS 2232L. This course is a continuation of EMT-Paramedic Phase I. The unit of study includes the following modules: the Cardiovascular System, General Pharmacology, and Central Nervous System. Five contact hours.

**EMS 2232L EMT-Paramedic Phase II Lab/Clinical** 3 cr.

Prerequisites: EMS 2231, EMS 2231L. Corequisite: EMS 2232. This course, a continuation of Phase I, will include emergency room rotation and an intensive care and critical care in-hospital rotation. Six contact hours: two laboratory hours; four clinical hours.

**EMS 2233 EMT-Paramedic Phase III** 4 cr.

Prerequisites: EMS 2232, EMS 2232L. Corequisite: EMS 2233L. The last part of the three term sequences of EMT-Paramedic instruction includes the following modules: 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** 6 cr.

Prerequisites: EMS 2232, EMS 2232L. Corequisite: EMS 2233. The last part of the three-term sequence of clinical experiences requires riding a Mobile Intensive Care Unit and hospital rotation in a local surgical facility. Twelve contact hours: one laboratory hour; eleven clinical hours.

**ENC -- English Composition**

**ENC 0010 Introduction to Composition (College Preparatory Course)**

ENC 0010 is an introductory course in composition designed to help students gain greater proficiency in basic writing skills. The course assesses the level at which students are writing to discover individual areas of deficiency in writing skills and provides the necessary instruction to help them overcome these deficiencies. As a result of carefully planned learning experiences, the student should be able to write clear, adequately-developed, logically-organized, effective paragraphs which conform to the conventions of standard American English. This course includes integrated laboratory work. This course does not apply toward the associate degree. Four credit hours, five contact hours.

**ENC 1101 English Composition I (T)** 3 cr.

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

**ENC 1102 English Composition II (T)** 3 cr.

Prerequisite: ENC 1101. As a continuation of ENC 1101, this course includes the study and practice in research writing and writing competencies. Three contact hours.

**ENC 1132 Introduction to Critical Writing (T)** 3 cr.

Prerequisite: ENC 1101. As additional preparation for argumentation and research, this course sharpens the students' critical thinking skills and improves their ability to compose analytical, interpretive, and evaluative essays in response to selected reading assignments. This course is designed for students who have successfully completed ENC 1101, but seek additional preparation for ENC 1102. Thus, it is advised that successful completers of ENC 1102 should not enroll in this course. Three contact hours.

**ENC 2090 Essential Skills in Communications** 1 cr.

Prerequisite: ENC 1101, ENC 1102, REA 1105 (if required). This course is designed for students who desire a brief, comprehensive review of the essential communications skills including reading, writing, and grammar. It is recommended for students who are preparing for the CLAST, for students who are retaking CLAST, and for students who are seeking a refresher course in communications skills. One contact hour.



**ENC 2210 Technical Report Writing (T) 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.

**ENC 2301 Advanced Writing (T) 3 cr.**

Prerequisite: ENC 1102 or ENC 2210. This course is designed to help perfect writing skills developed in freshman composition and to prepare students for sustained writing. Emphasis will be on clarity and elegance (without ostentation) of style. Close readings of samples of good, sophisticated writing will provide the basis for discussion of style and rhetorical principles. This course is not a creative writing course. Three contact hours.

**ENL – English Literature****ENL 2013 English Literature to 1798 (T) 3 cr.**

Prerequisite: ENC 1101. This course introduces the main literary traditions from Beowulf through the Restoration and Eighteenth Century. It provides a study of the most characteristic writings of these periods. Three contact hours.

**ENL 2023 English Literature Since 1798 (T) 3 cr.**

Prerequisite: ENC 1101. This course introduces the main literary traditions from the Romantic and Victorian periods to the present. It provides a study of the best and most characteristic writings of these periods. Three contact hours.

**ENS – English as a Second Language  
(for Non-Native Speakers)****ENS 1201 ESL Speech - Level II (T) 3 cr.**

Prerequisite: CELT score within the range of 31-50 and writing sample at Level II or successful completion of ESL college-prep series. Corequisites: ENS 1221, ENS 1241, ENS 1261, and ENS 1281. This course will give students practice in the usage of correct structure and phonetic patterns in oral/aural communication. Students will practice both listening comprehension and conversational patterns through individual and group presentations. Students will engage in exercises, short lectures, and conversations which will enhance their speaking and listening vocabularies, grammatical speech patterns, and oral comprehension. Three credit hours; three contact hours.

**ENS 1221 ESL Reading - Level II (T) 3 cr.**

Prerequisite: CELT score within the range of 31-50 and writing sample at Level II or successful completion of ESL college-prep series. Corequisites: ENS 1201, ENS 1241, ENS 1261, and ENS 1281. This course gives students practice in gaining increased reading speed and comprehension at both the literal and inferential levels. It will place emphasis on techniques of vocabulary development as well as techniques identifying basic forms of paragraph development. It will include activities which encourage

students to further develop their oral and written proficiency in English. Three credit hours; three contact hours.

**ENS 1241 ESL Writing - Level II (T) 3 cr.**

Prerequisite: CELT score within the range of 31-50 and writing sample at Level II or successful completion of ESL college-prep series. Corequisites: ENS 1201, ENS 1221, ENS 1261, and ENS 1281. This course gives students practice in writing unified, coherent paragraphs. Students will begin writing simple sentences combining and dictation. Practice will include spelling and punctuation. Students will then focus upon paragraph unity with practice in identifying and writing specific types of paragraph development. Three credit hours; three contact hours.

**ENS 1261 ESL Structure - Level II (T) 3 cr.**

Prerequisite: CELT score within the range of 31-50 and writing sample at Level II or successful completion of ESL college-pre series. Corequisites: ENS 1201, ENS 1221, ENS 1241, and ENS 1281. This course gives students the opportunity to develop skill in the use of English grammar in basic patterns involving interrogative, declarative and exclamatory sentences. It emphasizes verb tenses, irregular parts of speech and inflected forms. Activities will involve oral and written exercises in sentence transformation, communicative interaction, controlled responses and dictation. Three credit hours; three contact hours.

**ENS 1281 ESL Combined Skills - Level II (T) 3 cr.**

Prerequisite: CELT score within the range of 31-50 and writing sample at Level II or successful completion of ESL college-prep series. Corequisites: ENS 1201, ENS 1221, ENS 1241, and ENS 1261. The purpose of the combined skills course is to focus on the integration of the communication skills taught separately in ENS 1201, ENS 1221, ENS 1241, and ENS 1261. The students will participate in learning activities which promote spontaneous use of language in oral and written form. The students will develop personal strategies for analyzing and correcting their pronunciation, listening, speaking and writing problems. Through their carefully structured tasks, teachers will systematically analyze and correct student errors in ways to promote personal growth and increased proficiency. The materials used to integrate the skills in this course will promote appreciation of the students' own culture as well as the understanding of American values and customs. Three credit hours; three contact hours.

**ENS 1301 ESL Speech - Level III (T) 3 cr.**

Prerequisite: CELT score within the range of 51-70 and writing sample at Level III or successful completion of ENS 1200 series. Corequisites: ENS 1321, ENS 1341, ENS 1361, and ENS 1381. This course stresses the practice of the principles and methods involved in oral/aural communications. Students focus on purposeful and organized listening and speaking skills. Three credit hours; three contact hours.

**ENS 1321 ESL Reading - Level III (T) 3 cr.**

Prerequisite: CELT score within the range of 51-70 and writing sample at Level III or successful completion of ENS 1200 series. Corequisites: ENS 1301, ENS 1341, ENS



1361, and ENS 1381. Students learn to read materials that will increase their vocabulary, develop their critical thinking skills, improve their understanding of American culture, and prepare them for entrance into mainstream courses. The readings will not only instruct the students in comprehension techniques but also will give instruction in various aspects of American culture. Various library exercises will introduce the students to the campus library and teach them how to use the resources. Three credit hours; three contact hours.

**ENS 1341 ESL Writing - Level III (T) 3 cr.**

Prerequisite: CELT score within the range of 51-70 and writing sample at Level III or successful completion of ENS 1200 series. Corequisites: ENS 1301, ENS 1321, ENS 1361, and ENS 1381. This course reviews the various paragraph types. Students complete original paragraphs of narration, description, argumentation, and exposition utilizing their own vocabulary and main ideas and meeting the requirements of standard American English. The students also begin to explore the structure of the expository essay. Three credit hours; three contact hours.

**ENS 1361 ESL Structure - Level III (T) 3 cr.**

Prerequisite: CELT score within the range of 51-70 and writing sample at level III or successful completion of ENS 1200 series. Corequisites: ENS 1301, ENS 1321, ENS 1341, and ENS 1381. This course focuses on using advanced grammatical patterns in the context of realistic situations. Students will review verb tenses and be able to perform written and oral transformations of complex English structure patterns. Three credit hours; three contact hours.

**ENS 1381 ESL Combined Skills - Level III (T) 3 cr.**

Prerequisite: CELT score within the range of 51-70 and writing sample at Level III or successful completion of ENS 1200 series. Corequisites: ENS 1301, ENS 1321, ENS 1341, and ENS 1361. The purpose of the combined skills course is to focus on the integration of the communication skills taught separately in ENS 1301, ENS 1321, ENS 1341, and ENS 1361. The students will participate in learning activities which promote spontaneous use of language in oral and written form. The students will develop personal strategies for analyzing and correcting their pronunciation, listening, speaking and writing problems. Through their carefully structured tasks, teachers will systematically analyze and correct student errors in ways to promote personal growth and increased proficiency. The materials used to integrate the skills in this course will promote appreciation of the student's own culture as well as the understanding of American values and customs. Three credit hours; three contact hours.

**ESL -- English as a Second Language - Preparatory**

**ESL 0101 ESL Speech - Level I  
(College Preparatory Course)**

Prerequisite: CELT score within the range of 20 - 30 and writing sample at level I. Corequisites: ESL 0121, ESL 0141, ESL 0161, and ESL 0181. This course stresses the fundamentals of speech for nonnative speakers of English.

It focuses on improving spoken English for increased intelligibility and also focuses on improving listening skills for greater understanding of spoken English. The course provides instruction in the production of speech sounds (ones not part of the native language), stress, intonation, and rhythm in spoken English. The lesson units serve as a guide to help students use auditory distinctions and articulatory patterns important for understanding and being understood. This course does not apply toward the associate degree and is part of College Preparatory Studies. Three credit hours, three contact hours.

**ESL 0121 ESL Reading - Level I  
(College Preparatory Course)**

Prerequisite: CELT score within the range of 20-30 and writing sample at Level I. Corequisites: ESL 0101, ESL 0141, ESL 0161, and ESL 0181. The purpose of the course is to instruct students in techniques for grasping sentence and paragraph meaning. Students will learn word meanings in context and will increase their vocabulary. They will develop skills in determining literal meaning with minimum use of their bilingual dictionaries. The course will focus on increasing reading comprehension. It will lead students through increasingly complex reading passages to help them progress from literal meanings toward critical reading and thinking. Further, it will provide opportunities, through reading, to understand important ideas and values in American Life. This course does not apply toward the associate degree and is part of College Preparatory Studies. Three credit hours, three contact hours.

**ESL 0141 ESL Writing - Level I  
(College Preparatory Course)**

Prerequisite: CELT score within the range of 20-30 and writing sample at Level I. Corequisites: ESL 0101, ESL 0121, ESL 0161, and ESL 0181. The first half of the course will focus on controlled writing practice, beginning at the sentence level. Students will write brief journal entries and short narratives based on personal experience. This intensive writing practice serves to help establish a purpose for writing and to give students confidence in their ability to do so. The second half of the course will introduce students to writing as a process. They will practice, individually and in groups, writing brief paragraphs that demonstrate their competency in using the process, the format and the standards of acceptable writing. This course does not apply toward the associate degree and is part of College Preparatory Studies. Three credit hours, three contact hours.

**ESL 0161 ESL Structure - Level I  
(College Preparatory Course)**

Prerequisite: CELT score within the range of 20-30 and writing sample at Level I. Corequisites: ESL 0101, ESL 0121, ESL 0141, and ESL 0181. The purpose of the course is to present in meaningful sequence the grammar of the English language with a view toward linking the systematic study of the grammar to language use in purposeful communication. The students will apply the grammar points learned to the listening, speaking and writing activities in the corequisite classes. This course does not apply toward the associate degree and is part of the College Preparatory Studies. Three credit hours, three contact hours.

**ESL 0181 ESL Combined Skills - Level I  
(College Preparatory Course)**

Prerequisite: CELT score in range of 20-30 and writing sample at Level I. Corequisites: ESL 0101, ESL 0121, ESL 0141, and ESL 0161. The purpose of the combined skills course is to focus on the integration of the communication skills taught separately in ESL 0101, ESL 0121, ESL 0141, and ESL 0161. The students will participate in learning activities which promote spontaneous use of language in oral and written form. The students will develop personal strategies for analyzing and correcting their pronunciation, listening, speaking, and writing problems. Through their carefully structured tasks, teachers will systematically analyze and correct student errors in ways to promote personal growth and increased proficiency. The materials used to integrate the skills in this course will promote appreciation of the students' own cultures as well as an understanding of American customs and values. This course does not apply toward the associate degree and is part of College Preparatory Studies. Three credit hours, three contact hours.

**EST -- Electronic Specialty Technology**

---

**EST 1412 Biomedical Technology and  
Techniques** 2 cr.

Prerequisite: ETI 1725. This course, designed to introduce the students to the hospital, biomedical equipment manufacturers, and the contract maintenance organizations, emphasizes the organizational structure of the hospital and identifies 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 analyzed will include intensive care unit, cardiovascular diagnostic laboratory and operating rooms. Two contact hours.

**EST 2112 Electrical-Electronic Control  
Systems** 3 cr.

Prerequisite: EET 2119C. This course consists of the 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.

**EST 2436C Biomedical Instrumentation I (T)** 3 cr.

Prerequisites: CET 2113C, EET 2119C. This course introduces 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. Students will utilize these concepts 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.

**EST 2438C Biomedical Instrumentation II** 3 cr.

Prerequisite: EST 2436C. This course, a continuation of the study of biomedical instrumentation, introduces 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. Students will utilize these concepts in the lab to verify device performance, to perform calibration and to learn preventive and corrective maintenance techniques. Four contact hours: two lecture hours; two laboratory hours.

**EST 2603C Robotics (T)** 3 cr.

Prerequisites: CET 2122C, EST 2112, ETG 2504C, ETM 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 prepares the technician to install and maintain robots and other related automated industrial equipment. Hands-on exercises with trainer robots in the areas of assembly, troubleshooting, and programming are required for each student. Four contact hours: three lecture hours; one laboratory hour.

**ETC -- Engineering Technology: Civil**

---

**ETC 2220C Soils and Foundations** 3 cr.

Prerequisite: ETG 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. This course also covers the basic types of prevalent foundations, their design and behavior characteristics. Four contact hours: three lecture hours; one laboratory hour.

**ETC 2410C Structural Drafting (T)** 3 cr.

Prerequisite: ARC 2120C. 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 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 (T)** 3 cr.

Prerequisite: ETI 1421C. The course is a study of the fundamentals of concrete and its use as an engineering material. Topics included in the course are the design of concrete mixtures, use of admixtures, placement, special types of concrete, and the field-laboratory procedures used to achieve quality control. The course consists of lectures and laboratory. Four contact hours: two lecture hours; two laboratory hours.



**ETC 2500C Highway Drafting and Route Design (T) 3 cr.**

Prerequisite: ETC 2410C. This course is concerned 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 roadbeds, and earthwork computations applied to highway route design. Four contact hours: two lecture hours; two laboratory hours.

**ETC 2521C Hydrology and Hydraulics 3 cr.**

Corequisite: ETG 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. Students use laboratory time for fluid flow calculation and design. Four contact hours: three lecture hours; one laboratory hour.

**ETD -- Engineering Technology: Drafting****ETD 1100 Engineering Drawing (T) 3 cr.**

This survey course consists of the principles and practices involved in making and reading engineering drawings, with emphasis on lettering, industrial symbolism, orthographic projection and multiview representation. Four contact hours: two lecture hours; two laboratory hours.

**ETD 1706 Mechanical and Electrical Drafting 3 cr.**

Prerequisite: ETD 1100. Corequisite: Suggested EGS 1130C. This course places emphasis on assembly and detail drawings of mechanical parts. Also included in the course is an introduction to electrical drafting. Four contact hours: two lecture hours; two laboratory hours.

**ETD 2350 CAD - Advanced 3 cr.**

Prerequisites: CGS 2020 and CGS 2470. The course presents AutoLISP concepts and programming methods together with customization techniques for increasing drawing/design productivity. The basics of AutoLISP, development of files and functions, customization of menus and applications of advanced techniques are presented. Five contact hours: two lecture hours; three laboratory hours.

**ETD 2536C CAD - Mechanical Electrical 3 cr.**

Prerequisites: CGS 2470 and ETD 2538. The course deals with the use of AutoCAD and/or similar software for mechanical-electrical drawing and design applications. The emphasis in the course is on the use of computer graphics for the preparation of AEC mechanical-electrical drawings. Commercial as well as industrial structures are included. Five contact hours: two lecture hours; three laboratory hours.

**ETD 2538 CAD - Architectural 3 cr.**

Prerequisite: ARC 2120C and CGS 2470. The course covers the use of AutoCAD and/or similar software for architectural design and plan preparation. Emphasis in the course is placed on developing an understanding of AutoCAD and AEC Architectural software and applying this understanding to architectural practice. Residential as well

as commercial applications are presented. Five contact hours: two lecture hours; three laboratory hours.

**ETD 2545 Civil Drafting 3 cr.**

Prerequisite: ETD 1100. This course prepares the student for the fundamental concepts of civil drafting as it pertains to the field of civil engineering. Using surveyor's notes, the student will demonstrate, in pencil and ink, drafting techniques essential in preparing topographic and geographic maps. The student will also draw plot plans using all appropriate symbols and terminology that are used in civil engineers' offices. Four contact hours: two lecture hours; two laboratory hours.

**ETD 2548 CAD - Civil 3 cr.**

Prerequisites: CGS 2470 and ETD 2538. The course deals with the use of AutoCAD, LandCADD, and similar software for the preparation of engineering drawings as they relate to site planning, land development, and other civil engineering drawings. Emphasis in the course is on developing an understanding of computer graphics software and applying this understanding in the preparation of engineering drawings. Five contact hours: two lecture hours; three laboratory hours.

**ETG -- Engineering Technology: General****ETG 1201C X-Ray Physics 3 cr.**

Prerequisites: MAC 1104 and EET 1015C. 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. The course also covers processing radiographs, image intensification, special radiographic methods, along with a study of radiation hazards and protection and a field trip to medical diagnostic X-ray rooms. Four contact hours: three lecture hours; one laboratory hour.

**ETG 2202C X-Ray Systems 3 cr.**

Prerequisite: ETG 1201C. The course is centered on the practical application of principles in the laboratory where an X-Ray Unit Trainer (XRUT) is used to learn to read schematic diagrams and to learn what functions X-ray machine subsystems 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. The course also emphasizes film processing and X-ray safety along with the ethics required in medical X-ray equipment service. Six contact hours: three lecture hours; three laboratory hours.

**ETG 2204C X-Ray Practicum 3 cr.**

Prerequisite: ETG 2202C. This course provides the student with practical experience in the field of 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 course provides 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 3 cr.**

Prerequisite: ETG 2202C. 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. The student will analyze schematic diagrams of solid state and vacuum tube circuits to give 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 4 cr.**

Prerequisites: MAC 1114, ETI 1421C. This course is an introduction to the basic laws of mechanics and includes a study of force 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 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 formulae 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 (T) 3 cr.**

This course reviews the basic principles underlying nondestructive testing. One purpose of the course is to stimulate interested students 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 3 cr.**

Prerequisite: ETI 1121. The course includes the study of types and uses of liquid penetrants as they pertain to nondestructive testing to include development, application, compatibility and tests of penetrant materials. The course also includes 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 (T) 3 cr.**

This course examines the major engineering materials

used in industry, metallic and non-metallic, in terms of their properties, forming processes used, and their engineering applications. Three contact hours.

**ETI 1700 Industrial Safety (T) 3 cr.**

This course imparts the knowledge essential to safe practices in industry. Included in the course are an examination of current industrial safety management methods and the major provisions of the Occupational Safety and Health Act. Three contact hours.

**ETI 1725 Biomedical Safety and Terminology 2 cr.**

Prerequisites: APB 2190C, EET 1025C. This course, designed to impart the knowledge essential to safe practices in the handling of biomedical patient-care devices, 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 provides 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 2681 Industrial Supervision (T) 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 1700 Air Conditioning Fundamentals 3 cr.**

Corequisite: MAC 1104. The course covers the basic principles of air conditioning technology including heat pumps. The basic underlying theory and principles are presented which include fluids and pressures, pressure-enthalpy relationships, heat transfer, psychrometrics, and the relationships between air properties and comfort. Various technical options currently available in terms of system components and design are introduced. Three contact hours.

**ETM 1710 Air Conditioning Load Analysis 3 cr.**

Prerequisite: ETM 1700. The course deals with psychrometric processes, heat transfer, and the methods used for load analysis. Conductivity, convection, and their effect on heat transfer are presented together with the methods used in determining heating and cooling loads on residential and commercial buildings. Three contact hours.

**ETM 1720 Air Conditioning and Refrigeration Equipment 3 cr.**

Prerequisite: ETM 1700. The course covers the design and selection of equipment and components which form parts of the air conditioning system. Included in the course is a study of air handling equipment, refrigerants, piping systems, and refrigeration equipment. Three contact hours.

**ETM 1725 Ventilation 3 cr.**

Prerequisites: ETM 1700, ETM 1710, ETM 1720. Corequisite: ETM 1730. The course deals with ventilation

system design principles and practices currently in use for maintaining indoor air quality. Included in the course is the study of OSHA ventilation standards, hood selection and design, as well as ventilation design practices as an integral part of air conditioning systems design. Three contact hours.

**ETM 1730 Air Distribution 3 cr.**

Prerequisites: ETM 1700, ETM 1710, ETM 1720. Corequisite: ETM 1725. The course deals with air flow theory and practice as applied to residential and commercial air distribution systems. Duct design, fans and blowers, pressure analysis, and room air distribution are included. Three contact hours.

**ETM 1740 Air Conditioning Control Systems 3 cr.**

Prerequisites: EET 1035C, ETM 1710, ETM 1720. Corequisite: ETM 1730. The course covers the theory, operation, and design of control systems used in refrigeration and air conditioning. The course includes a study of control fundamentals, electric and electronic controls, pneumatic controls, direct digital controls, and control systems design for residential and commercial installations. Three contact hours.

**ETM 2221 Elements of Applied Energy 3 cr.**

Prerequisites: MTB 1322, ETI 1421C. This introductory course in applied thermodynamics consists of 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 (T) 3 cr.**

Prerequisites: MAC 1114, ETI 1421C. This course is a study of the laws involving the flow of fluids and their application in the processes, equipment and machines that are used in the energy-to-work transformation. The course emphasizes both hydraulics and pneumatics, and the laboratory exercises concentrate on fluid power. Four contact hours: three lecture hours; one laboratory hour.

**ETM 2610C Air Conditioning and Heating 3 cr.**

Prerequisites: MAC 1114 and ETI 1421C. This introductory course to environmental control of buildings and houses emphasizes equipment performance and system design. Three contact hours.

**ETM 2750C Air Conditioning Systems Design I 3 cr.**

Prerequisites: ETM 1730, ETM 1740. The course deals with system selection and design to meet the heating, cooling, humidity control, and ventilation requirements of residential and commercial buildings. The course includes preparation of engineering drawings by the student. This is the first course in a series of two courses dealing with systems design. Four contact hours: two lecture hours; two laboratory hours.

**ETM 2752C Air Conditioning Systems Design II 3 cr.**

Prerequisite: ETM 2750C. The course is a continuation of ETM 2750C and deals with the design of large central air conditioning systems. Students develop an understanding

of the design process through design analysis, calculations, equipment selection, preparation of engineering drawings, and preparation of cost estimates. Four contact hours: two lecture hours; two laboratory hours.

**ETM 2775 Air Conditioning Estimating 3 cr.**

Prerequisites: ETM 1720, ETM 1730, ETM 1740. The course covers current practices and procedures used in estimating air conditioning and heating systems. Quantity survey methods, classification of work, cost estimating, and preparation of bid proposals are included in the course of study. Three contact hours.

**ETM 2781C CAD Mechanical (HVAC) 3 cr.**

Prerequisite: CGS 2470. Corequisite ETM 2752C. The course deals with the application of CAD systems in heating, ventilating, and air conditioning design and other building-mechanical applications. Four contact hours: two lecture hours; two laboratory hours.

**EUH -- European History**

**EUH 1000 Western Civilization through 1715 (T) 3 cr.**

This course consists of 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 from 1715 to the Present (T) 3 cr.**

This course in modern western institutions from 1715 to the present day, include 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. The course includes reading and writing competencies. Three contact hours.

**FAD -- Home Economics: Family Development**

**FAD 1230 Dynamics of Modern Living 3 cr.**

This course studies the interpersonal relationship of personal and family problems: analysis of the basic elements involved in courtship, mate selection, engagement, marriage, parenthood, and child development. It also covers 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.

**FFP -- Fire Fighting and Protection**

**FFP 1000 Introduction to Fire Protection 3 cr.**

This course is 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; a review of municipal fire defenses, fire prevention principles, techniques of fire control, codes and ordi-



nances; the problems of the fire administrator, and a survey of professional fire protection career opportunities. Three contact hours.

**FFP 1100 Fire Service Organization 3 cr.**

This course presents the 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 3 cr.**

This course, 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 1200 Fundamentals of Fire Prevention 3 cr.**

The course presents the structure and function of the fire prevention organization: the interpretation and application code regulations; a study of the procedures and techniques of fire prevention, including inspection, surveying and mapping, recognition and elimination of fire hazards; the problems of public relations; and the coordination with other governmental agencies. Three contact hours.

**FFP 2210 Fire Investigation 3 cr.**

This course presents 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.

**FFP 2300 Fire Codes and Building Construction 3 cr.**

This course includes the study of federal, state, and local laws applicable to the fire service; a survey of Fire Codes and Standards of the National Fire Protection Association and the Fire Prevention Code of the American Insurance Association; the role of the State Fire Marshal; the principles and practices used in building construction. Three contact hours.

**FFP 2400 Fire Fighting Tactics and Strategy 3 cr.**

This course covers the basic concepts involved in fire fighting, including fire behavior, size-up, attack principles, utilization of available manpower and equipment, and pre-planning fire problems. Emphasis will be on developing thinking skills in relation to crises. Three contact hours.

**FFP 2500 Hazardous Materials I 3 cr.**

This course presents the basic fundamentals of chemistry used in fire science; types of chemicals and processes; and laws at federal, state, and local levels pertaining to use, storage, and transportation of chemicals. Also, topics covered include hazards of radioactives, precautions to observe in fighting fires involving hazardous materials, and

laboratory demonstrations of incompatibles. Three contact hours.

**FFP 2501 Hazardous Materials II 3 cr.**

Prerequisite: FFP 2500. This course is a continuation of FFP 2500 and is divided into two sections. The first section deals with why materials explode, why they are unstable, and how they react with water, air, and each other. The second section explores toxicity. Three contact hours.

**FFP 2600 Fire Fighting Equipment and Apparatus 3 cr.**

This course covers the principles of pumping, construction and operation of pumps and pumping accessories, driving and pumping practices, principles and operation of aerial ladders, hydraulic systems, water supply, trouble shooting, and related subjects. The course also includes the principles of the care, maintenance, and operation of fire department vehicles. Subjects covered include theory of internal combustion engines, power development and transmission, torque and horsepower, electrical and brake systems, carburetion, engine tune-up and trouble shooting, characteristics of fuels and lubricants, and other related principles of automotive vehicles. Three contact hours.

**FFP 2660 Rescue Practices 3 cr.**

This course includes instruction in life saving practices pertaining to the fire company and training for rescue equipment. The course also covers the fire department's role in civil defense and other disaster acts, chemicals and diseases that affect breathing, law on first aid, and the use of breathing apparatus. Three contact hours.

**FIL – Film**

---

**FIL 1000 The Movies as Art (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This general survey course examines the development of the motion picture as a universal art form: its historical and international background; theme and subject selection and script development; technological equipment and innovations; elements of visual composition, sound and music; acting and directing; and film criticism and analysis. This course examines the motion picture as a universal expression of man's varied cultures and creative expressions. This course includes reading and writing competencies. Four contact hours (lecture/viewing).

**FIN – Finance**

---

**FIN 2000 Principles of Finance (T) 3 cr.**

Prerequisites: OST 1324, ACG 1003 or ACG 2001, or consent of professor. This course consists of the study of investment characteristics of stocks and bonds, securities market, introduction to securities analysis, commercial banks, and the federal reserve system; inflation, deflation, and the money supply; history and nature of money, and financial management. Three contact hours.

**FIN 2100 Personal Finance (T) 3 cr.**

This course is a study of economic and personal goals

including personal budgeting, credit buying, borrowing money, banking facilities, the nature of investments, life insurance, casualty insurance, medical insurance, home ownership, stocks and bonds, and retirement plans. Three contact hours.

## **FOS -- Food Science**

### **FOS 1201 Sanitation and Safety (T) 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. The course emphasizes methods of accident and fire prevention. Three contact hours.

## **FRE -- French Language**

### **FRE 1000 Conversational French (T) 3 cr.**

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work).

### **FRE 1120 Beginning French I (T) 4 cr.**

This beginning course consists of the fundamentals of French speech and grammar taught by integrating the basic communication skills of hearing and understanding, speaking, reading, and writing. Five contact hours: four lecture hours; one unsupervised laboratory hour.

### **FRE 1121 Beginning French II (T) 4 cr.**

Prerequisite: FRE 1120 or equivalent. This course is a continuation of FRE 1120. Five contact hours: four lecture hours; one unsupervised laboratory hour.

### **FRE 2200 Intermediate French I (T) 3 cr.**

Prerequisite: FRE 1121 or equivalent study. This course includes 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 (T) 3 cr.**

Prerequisite: FRE 2200. This course is 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 3 cr.**

The student will explore employment opportunities in the food services industry, including job opportunities in hospitals, extended care facilities, restaurants, hotels, motels, fast food operations, and private clubs. The course empha-

sizes the analysis and the acquisition of educational and personal competencies required for job success. Three contact hours.

### **FSS 1100 Menu Design and Food Merchandising 3 cr.**

The student will acquire knowledge and demonstrate skills in menu planning, costing and pricing menu items, and designing menu format. The course will utilize effective merchandising methods in food display, advertising, and interior decorating and emphasize positive public relations techniques. Three contact hours.

### **FSS 1120 Food and Beverage Purchasing 3 cr.**

The student will acquire the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving, and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques. Three contact hours.

### **FSS 1202C Basic Food Preparation 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. The course emphasizes safety and sanitation practices. Five contact hours: three lecture hours; two laboratory hours.

### **FSS 1221C Quantity Food Production 3 cr.**

Prerequisite: FSS 1202C. The student will acquire the principles of quantity food preparation and service for cafeterias, restaurants, and institutions. The course will emphasize equipment use and care, standardized recipes, portion control, work plans, and schedules. Five contact hours: two lecture hours; three laboratory hours.

### **FSS 1246C Baking 3 cr.**

The student will acquire knowledge of the composition and properties of baking ingredients. The student will utilize the proper equipment and tools and standardized recipes to prepare yeast breads, rolls, pastries, and cakes in the food service laboratory. The instructor will evaluate the products prepared by established food service standards. Five contact hours: one lecture hour; four laboratory hours.

### **FSS 1248C Garde-Manger 3 cr.**

The student will acquire knowledge and demonstrate skills in the application of special garde-manger techniques used in ice and tallow sculpturing. The class will observe dexterity in the proper use of tools to produce dinner and ice sculptured showpieces. Four contact hours: two lecture hours; two laboratory hours.

### **FSS 1250 Food and Beverage Service 3 cr.**

The student will acquire knowledge of various types of service appropriate to coffee shops, dining rooms, luncheons, banquets and buffets. The course will demonstrate the relationship of menu, equipment, supplies, merchandising and personnel to create good patron acceptance. Three contact hours.



**FSS 1304 Management Clinical Practice I 3 cr.**

The course consists of 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 3 cr.**

Prerequisite: FSS 1304. Corequisites: FSS 1120 or FSS 2501. This course, a continuation of FSS 1304, consists of 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. This course emphasizes 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 3 cr.**

The student will evaluate the various types of food service equipment relative to cost, structure, function, and maintenance. The student will design a layout for a food service operation 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 3 cr.**

The student will develop and demonstrate skills necessary to the managerial procedures and functions of a food service operation. The course emphasizes personnel selection, interviewing techniques, supervision, organization, and planning and evaluation. Three contact hours.

**FSS 2301 Food Service Delivery Systems 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 and study their purposes, organization, need in society, general functions, and staffing. The course will analyze and discuss facilities such as hospitals, nursing and rehabilitation centers, health maintenance organizations, private and public outpatient clinics, and neighborhood health care centers. Three contact hours.

**FSS 2302 Management Clinical Practice III 4 cr.**

Prerequisite: FSS 1306. This course, a continuation of FSS 1306, consists of 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 3 cr.**

This course presents the basic principles and procedures of effective food and beverage cost control, including food and beverage purchasing, receiving, issuing, calcula-

tion of standards, production, and planning special control. Three contact hours.

**FSS 2945 Food Service Internship 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. The student will apply course theories and skills in this work experience. The internship training program requires a minimum of twelve weeks for a total of 450 hours. Thirty-eight contact hours: one lecture hour; thirty-seven field hours.

**GEA – Geography: Regional Areas****GEA 1000 World Geography (T) 3 cr.**

This introductory course deals with humanity's relationship to the natural environment in the various climatic, regional, and economic areas of the world, and the interrelationships and problems of conservation of natural resources. Three contact hours.

**GEB – General Business****GEB 1011 Introduction to Business (T) 3 cr.**

This course is an introduction to business systems and procedures. The orderly presentation of the subject matter provides the student with the framework for further study in the field or the background for practical application in business and industry. Three contact hours.

**GEO -- Geography: Systematic****GEO 2370 Conservation of Resources (T) 3 cr.**

This survey course of natural and human resources of the world places special emphasis on the United States with an intensive study of the wise use and wasteful exploitation of these resources. Three contact hours.

**GER – German and Germanic Languages****GER 1000 Conversational German (T) 3 cr.**

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language, it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

**GER 1120 Beginning German I (T) 4 cr.**

This beginning course consists of the fundamentals of German speech and grammar taught by integrating the basic communication skills of hearing and understanding, speaking, reading, and writing. Five contact hours: four lecture hours; one unsupervised laboratory hour.

**GER 1121 Beginning German II (T) 4 cr.**

Prerequisite: GER 1120 or equivalent. This course is a

continuation of GER 1120. Five contact hours: four lecture hours; one unsupervised laboratory hour.

**GER 2200 Intermediate German I (T) 3 cr.**

Prerequisite: GER 1121. This course is a thorough review of the principles of grammar. This review will be integrated with compositions and conversation planned to develop a basic active vocabulary and facility in communicating in written and spoken German. Four contact hours: three lecture hours; one laboratory hour.

**GLY -- Geology**

**GLY 1001 Earth and Space Science (T) 3 cr.**

This course acquaints 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 1001L Earth and Space Science Laboratory (T) 1 cr.**

Corequisite: GLY 1001, or following GLY 1001. This is a lab course designed to supplement GLY 1001. Students will learn to identify rocks and minerals, interpret geologic maps, and explore the concepts of oceanography, earth dynamics and astronomy. Two contact hours (laboratory).

**GLY 1010 Physical Geology (T) 3 cr.**

The student will benefit by taking high school algebra or MAT 0024 prior to enrolling in this course. Physical Geology, for majors and non majors, is the study of the earth. The course covers 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. Three contact hours.

**GLY 1010L Physical Geology Laboratory (T) 1 cr.**

Corequisite: GLY 1010, or following GLY 1010. This course includes laboratory activities designed to supplement GLY 1010. Students will study rocks and minerals, earth history, fossils, structural features of the earth and various earth forms as related to certain geologic processes with the aid of rock and mineral samples, topographic maps and aerial photographs. Two contact hours (laboratory).

**GRA -- Graphic Arts**

**GRA 1500 Theory of Printing Processes (T) 5 cr.**

Corequisite: GRA 1502L. This lecture course, designed to give an introduction to major processes of the printing industry, includes all methods of typesetting, phototypesetting, hand and other machine methods of typesetting, mechanical art preparation, printer's math and proofreading. Five contact hours.

**GRA 1502L Printing Processes -- Laboratory 4 cr.**

Corequisite: GRA 1500. This laboratory course, de-

signed to be an introduction to and experience in the basic skills of three of the major processes of the printing industry, emphasizes cold type and phototypesetting and mechanical art preparation. Also introduced are typesetting and form makeup (hand and machine), lockup and letterpress operation. Eight contact hours (theory/laboratory).

**GRA 1503 Theory of Lithographic Processes 5 cr.**

Corequisite: GRA 1504L. This lecture course, designed to give an introduction to three major processes of the lithographic industry, includes process camera operation, negative stripping and platemaking, and offset press operation. Five contact hours.

**GRA 1504L Lithographic Processes Laboratory 4 cr.**

Corequisite: GRA 1503. This laboratory course, designed to give an introduction to and experience in the basic skills of three major processes of the lithographic industry, includes process camera operation, negative stripping and platemaking, offset press operation, and related bindery functions. Eight contact hours (theory/laboratory).

**GRA 1540 Layout and Design (T) 3 cr.**

This course teaches the technique of preparing layouts to be used for customer approval and the preparation of camera-ready mechanicals of work ready to be printed. Three contact hours.

**GRA 1706 Graphic Arts Estimating (T) 3 cr.**

This course uses the industry-accepted Franklin Printing Catalog to develop the basic technique of estimating the cost of printed matter and its production methods, from layout to finished product. Three contact hours.

**GRA 2537L Cold Type Typesetting and Pasteup 3 cr.**

Prerequisite: GRA 1504L. Corequisite: GRA 1540. This course teaches the basic techniques of setting type by strike-on and photographic typesetting equipment, and also the preparation of mechanical art forms. The course also includes pen ruling and machine forms. Six contact hours (theory/laboratory).

**GRA 2538L Advanced Cold Type Typesetting and Pasteup 5 cr.**

Prerequisite: GRA 2537L. This advanced course provides for skill development in the techniques of setting type by strike-on and photographic typesetting equipment, and also the preparation of mechanical art forms. The course emphasizes the application of basic techniques toward greater job complexity, increased quality and increased productivity. Ten contact hours (theory/laboratory).

**GRA 2571L Camera Operation and Film Processing 3 cr.**

Prerequisite: GRA 1504L. Corequisite: GRA 1540. This course presents the technique of operating the process camera for the reproduction of line and halftone copy negatives, 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** 5 cr.

Prerequisite: GRA 2571L. This advanced course provides for skill development in the technique of operating the process camera for the reproduction of line and halftone copy negatives, contact printing, preparation of darkroom chemicals, and developing graphic arts films and papers. The course emphasizes the application of basic techniques toward greater job complexity, increased quality and increased productivity. Ten contact hours (theory/laboratory).

**GRA 2601L Negative Stripping and Offset Platemaking** 3 cr.

Prerequisite: GRA 1504L. Corequisite: GRA 1540. This course teaches the basic techniques for stripping up offset negatives and positives for proper press position, separating for color, and for exposing and developing offset press plates. Six contact hours (theory/laboratory).

**GRA 2602L Advanced Negative Stripping and Offset Platemaking** 5 cr.

Prerequisite: GRA 2601L. This advanced course provides for skill development in the technique of stripping up offset negatives and positives for proper press position, separating for color, and exposing and developing offset press plates. This course emphasizes the application of basic techniques toward greater job complexity, increased quality, and increased productivity. Ten contact hours.

**GRA 2630L Letterpress Press Operation and Lockup** 3 cr.

This laboratory course teaches the basic technique of setting up and operating both hand-fed and automatic letterpress presses. Six contact hours (theory/laboratory).

**GRA 2635L Offset Press Operation** 3 cr.

Prerequisite: GRA 1504L. Corequisite: GRA 1540. This course teaches the basic technique of setting up, operating, and maintaining duplicators and off-set presses in the 10x15, 11x17, and 14x20 inch ranges. Six contact hours (theory/laboratory).

**GRA 2635L Advanced Offset Press Operation** 5 cr.

Prerequisite: GRA 2635L. This advanced laboratory course provides for skill development in the technique of setting up, operating, and maintaining duplicators and offset presses in the 10x15, 11x17 and 14x20 inch ranges. This course emphasizes the application of basic techniques toward greater job complexity, increased quality, and increased productivity. Ten contact hours (theory/laboratory).

**GRA 2945 Practicum** 6 cr.

This course provides experience in the business/industrial setting under actual production standards. Eighteen contact hours (practicum).

**GRK -- Modern Greek Language**

---

**GRK 1000 Conversational Greek (T)** 3 cr.

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

**HBR -- Modern Hebrew Language**

---

**HBR 1000 Conversational Hebrew (T)** 3 cr.

This course concentrates on the development of oral and conversation skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

**HFT -- Hotel and Restaurant**

---

**HFT 1000 Introduction to Hospitality Management (T)** 3 cr.

This course introduces the student to the hospitality industry and to the management of hotels, motels, and restaurants. This orientation course presents the history, organization, problems and opportunities in the hotel, motel and restaurant industry. Three contact hours.

**HFT 1250 Hotel/Motel Operation (T)** 3 cr.

This course acquaints 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 1265 Restaurant Operation** 3 cr.

This course includes 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.

**HFT 1270 Apartment Management** 3 cr.

This course outlines the procedures to be followed in the day-to-day problems encountered in the management and

operational effectiveness applied to apartment management. The course covers all facets of apartment management including leases, termination, collection forms, maintenance, 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 3 cr.**

This course guides the student through all the skills (including directing the activities and solving the complex problems) needed to manage properly the front office of a hotel/motel. The course also acquaints the student with the operation of all the departments as they apply to the student's primary responsibility of selling rooms and serving guests. Three contact hours.

**HFT 2221 Customer-Personnel Relations 3 cr.**

This course explores the various successful techniques involved in establishing effective communications and functional relationships with the customer and with personnel at all levels. Three contact hours.

**HFT 2700 Tourism (T) 3 cr.**

Prerequisite: HFT 1000. This course consists of a study of tourism, which is travel, and includes the entire hospitality field -- hotels, motels, resorts, restaurants, camping and all the supportive services for travelers and vacationers. This course develops an understanding of the travel modes and enables the student to become knowledgeable and responsive to the developments and the economic approaches that are necessary for a travel manager. Three contact hours.

**HFT 2941 Internship (T) 3 cr.**

This course consists of on-the-job work experience supplied by the hotel-motel restaurant industries. Job placement will be dependent upon the student's preference and availability of participating hospitality institutions. The course consists of 15 hours per week of on-the-job instruction accompanied by one seminar each week. Students employed in the industry will receive the on-going rate of part-time help. Fifteen contact hours: one lecture hour; fourteen field hours.

**HFT 2942 Internship 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 availability 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; fourteen field hours.

**HHD -- Housing and Home Design**

**HHD 1122 Housing Alternatives 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.

**HHD 1232C Functions and Psychology of Space 3 cr.**

Prerequisite: HHD 1321. This course analyzes social, private and work spaces 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. The course also will explore the multiples of background modifications for visual impact on the total design of an interior space. Four contact hours: two lecture hours; two laboratory hours.

**HHD 1321 Principles of Interior Design (T) 3 cr.**

The course content includes an in-depth study of the elements and principles of design. The course demonstrates 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 interior spaces. The course will also explore employment opportunities. Four contact: two lecture hours; two laboratory hours.

**HHD 1360C Construction of Window Treatments and Draperies 3 cr.**

Instruction in this course includes competency development relating to identification, use and care of tools and equipment, and construction of window treatments and valances. This course emphasizes construction and installation techniques and stresses instruction and practice on all commercial drapery equipment. Six contact hours: two lecture hours; four laboratory hours.

**HHD 1365C Home Accessories Construction 3 cr.**

This course covers designing and executing home accessory projects and restoration of discarded accessories and use of alternative materials. Extensive course work focuses on preserving and restoring collectibles for the home, as well as construction of new items worthy of being called collectibles. Six contact hours: two lecture hours; four laboratory hours.

**HHD 1426 Materials and Sources 3 cr.**

This course is a study of the materials of interior design and sources of each. Topics include textiles, floor and wall coverings, furniture, window treatments and accessories. This course gives special emphasis to customer relations and providing product information to the customer. Three contact hours.

**HHD 1450C Fundamentals of Restoration and Preservation 3 cr.**

This course, designed to make the individual better able to preserve existing features inside and outside of the house, explores in supervised experiences, choices in what to restore vs. what to preserve. The course includes hands on practice in developing restoration and preservation skills. Six contact hours: two lecture hours; four laboratory hours.



**HHD 1452 Home Maintenance and Repair 3 cr.**

The course content and instruction, directed toward making the home owner self-sufficient in handling minor care, repair, and maintenance problems, include problems with electric power, plumbing emergencies, care and repair of floors and floor coverings, interior painting, wallpapering, furniture care and repairs, and miscellaneous repairs. This course will also discuss tools needed, work safety, and combatting pests and fungi. The course provides opportunities for laboratory experiences in practical applications. Three contact hours.

**HHD 1500C Decorating with Slipcovers 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 1510C Introduction To Upholstery 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, outsides and trimmings, pleated skirts, dust ruffles; and making cushions. The course places emphasis 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 1511C Advanced Upholstery 3 cr.**

This course, designed to enhance skills and to develop more productive work habits, includes channeling, tufting, making skirts, repairing, and spot touch-up of furniture, color and color schemes, and headboards. The course places a special emphasis upon authentic restoration of antiques and classic furniture styles. Six contact hours: two lecture hours; four laboratory hours.

**HHD 1611 History of Interiors I (T) 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.

**HHD 1618 History of Interiors II (T) 3 cr.**

Prerequisite: HHD 1611. 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.

**HHD 2234C Residential and Commercial Design 3 cr.**

Prerequisite: HHD 1232C. This laboratory course is designed to provide skill development in planning residential and commercial interiors from blue-prints 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? 3 cr.**

This course studies the process of restoring a home: planning interior and exterior renovations, estimating costs, choosing contractors, doing it yourself, getting involved in local preservation groups. The course places a special emphasis 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 2323C Perspective Renderings -- Housing 3 cr.**

This course places emphasis 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 2324C Graphic Presentation Techniques 3 cr.**

Prerequisite: HHD 2323C. 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 3 cr.**

This course includes a comparative analysis of home architectural interiors and exteriors based on elements of home design recognizable in home construction. The course also includes a study of antique, reproduction and modern exteriors with emphasis on consequences of prior and future preservation of the structures studied. Three contact hours.

**HHD 2810 Marketing Techniques for the Interior Designer 3 cr.**

Prerequisites: HHD 1426 and HHD 1232C. Utilization of marketing techniques in selling interior design materials is the focus of this course. To provide 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 6 cr.**

This course requires 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 individuals within the business community. Twenty contact hours: one lecture hour; nineteen field hours.

**HHD 2945 Interior Design Internship and Seminar 6 cr.**

Prerequisite: Approval of program director. After completion of professional courses, 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. Enrollment in this course requires permission of the program director. Twenty-one contact hours: one lecture hour; twenty field hours.

## **HIS -- General History**

### **HIS 1907 Honors Survey of History (T) 3 cr.**

Prerequisites: Outstanding performance in AMH 2010, 2020; EUH 1000, 1001; recommendation by the Department. This independent survey in one or more selected fields of history incorporates extensive research and in-depth readings as well as developing 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.

## **HLP -- Health, Leisure, and Physical Education**

### **HLP 1081 Health Analysis and Improvement (T) 2 cr.**

Recommended corequisite: a physical fitness conditioning course (PEM 1148, Walking for Fitness; PEM 1148, Beginning Jogging; PEM 1351, Cycling for Safety and Fitness; PEM 1171, Aerobics to Music; or PEM 1131, Strength Training (Nautilus/Universal)). This course is designed to introduce the principles, concepts, and values of physical activity, nutrition, and fitness as they relate to optimal health and the lifelong process of wellness. It involves lectures, assessment of student's current health/fitness status, an individualized training program, a computerized diet analysis, and an introduction to varied activities designed to improve the components of physical fitness. It is recommended and in some cases required that the student obtain medical approval prior to participation in the course. Two contact hours.

## **HME -- Home Management and Equipment**

### **HME 1200 Home Management (T) 3 cr.**

This course introduces the student 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 course presents a decision-making orientation to sharpen problem solving skills in managing home and physical resources. Three contact hours.

## **HSC -- Health Science**

### **HSC 1100 Personal and Community Health (T) 3 cr.**

This course consists of a study of health related problems which are of major importance to our society, with emphasis on the study and examination of drugs, tobacco, alcohol, sex, and on general principles involved in our present understanding of health related areas. Three contact hours.

### **HSC 1531 Medical Terminology (for Health Professions) (T) 2 cr.**

This course is designed to provide a basic working knowledge of medical terminology to students entering the health field. This course will cover word analysis of the terminology for the various body systems as well as basic terminology for pathology, microbiology, surgery, psychiatry, and aging specialties. Two contact hours.

### **HSC 2400 Standard First Aid and Personal Safety (T) 2 cr.**

This course meets the needs of individuals who have an opportunity to give first aid care frequently whether in their daily routine or special activities. Upon successful completion of the course, a student earns the American National Red Cross Standard First Aid and Personal Safety Certificate. Two contact hours.

## **HUM -- Humanities**

### **HUM 1470 Intercultural Topics 1 cr.**

This course is a survey of contemporary topics related to a specific culture. The course may be repeated for credit when the cultural setting is changed. One contact hour.

### **HUMA 1740 Overseas Humanities (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. The first half of a humanities course offers students a study/travel program centered on 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 contains reading and writing competencies. Three contact hours.

### **HUMB 1740 Overseas Humanities (T) 3 cr.**

The second half of a humanities course offers students a study/travel program centered on 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. (Elective credit only). Three contact hours.

### **HUM 2020 Humanities Forum (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. A general introduction to Western Humanities emphasizing the study of values as expressed in the philosophies and arts of particular historical epochs of the cultures of Northern Europe. The epochs treated may vary from year to year. Three contact hours.



**HUM 2211 Humanities: The Foundations (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course consists of the study of 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 2236 Humanities: Mainstreams of Cultures, 15th to 20th Century (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course consists of the study of life and creative expressions in Europe from the Medieval/Renaissance to the 20th Century 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 and 19th Century as they relate to other world developments. The course includes reading and writing competencies. Three contact hours.

**HUM 2251 Humanities: 20th Century Cultural Perspectives (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course consists of the study of life and creative expressions 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 beginning of the 20th Century to the present. The course includes reading and writing competencies. Three contact hours.

**HUM 2410 Humanities of Asia (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course surveys Asian cultures and their creative expressions through the media of visual arts, music, literature, and philosophic thought. This course includes reading and writing competencies. Three contact hours.

**HUM 2450 Humanities in the Americas (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course consists of the study of life and creative expressions in the Americas as surveyed through the media of visual arts, music, literature, philosophy, and social history. This course includes reading and writing competencies. Three contact hours.

**HUM 2472 Intercultural Explorations (T) 3 cr.**

Prerequisite: ENC 1101, or satisfactory score on placement test. 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. A student may repeat this course for credit three times when cultural setting is changed. However, it can satisfy only three hours in Category B of the General Education Requirements. Additional courses, if taken, must stand as electives only. Particular cultural settings are shown by suffix letter to the humanities designation as follows: HUMA 2472, Greece; HUMB 2472, China; HUMC 2472, Middle East; HUMD 2472, Japan; HUME 2472, France; HUMF 2472, Latin America; HUMG 2472, Soviet Union; HUMH 2472, Spain. Three contact hours.

**HUN – Human Nutrition**

---

**HUN 1003 Weight Management Through Nutrition and Fitness (T) 3 cr.**

This course is designed for students to acquire basic principles of nutrition, behavioral analysis and exercise, and apply them to the development, and implementation of a weight management plan. Three contact hours.

**HUN 1201 Principles of Nutrition (T) 3 cr.**

The student will acquire the basic principles of nutrition and develop skill in applying the recommended dietary allowances to all age groups. The course emphasizes key food nutrients, consumer information regarding food economy, quality food purchasing, and maximum nutrition for the life cycle. Three contact hours.

**IDS -- Interdisciplinary Studies**

---

**IDS 1935 Interdisciplinary Studies Seminar (T) 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. Students may repeat the course. Two contact hours.

**IEA -- Industrial Education Applied**

---

**IEA 1305 Industrial Survival Procedures 3 cr.**

This course teaches basic fundamentals of first aid, fire prevention and methods of containing fires until professional fire fighters or disaster personnel arrive. The course includes methods to be implemented with minor/major accidents or illness, evacuation procedures, property protection methods, fire/explosion handling procedures. The course places special emphasis on methods of orderly employee conduct and preventing panic. Three contact hours.

**INR -- International Relations**

---

**INR 2002 International Relations (T) 3 cr.**

This course is 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. This course examines the function and role of international organizations. Three contact hours.

**ISC -- Interdisciplinary Science - Natural****ISC 1021 Fundamentals of Natural Science (T) 3 cr.**

This course, designed to allow students to study processes of science, concepts of science, natural phenomena, and/or current problem areas, consists of selected topics studied in terms of their relationship and significance to the various science disciplines. This course is not designed as an introductory or preparatory course for any specific science. Three contact hours.

**ISS -- Interdisciplinary Social Sciences****ISS 1120 Origins of American Society (Economic, Political and International Institutions) (T) 3 cr.**

This course is an examination of American political institutions, American economic institutions, and America's leadership in the world. This course includes a study of the United States Constitution. The course includes reading and writing competencies. Three contact hours.

**ITA -- Italian Language****ITA 1000 Conversational Italian (T) 3 cr.**

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

**JPN -- Japanese Language****JPN 1000 Conversational Japanese (T) 3 cr.**

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

**LAH -- Latin American History****LAH 2000 History of the Americas (T) 3 cr.**

This course consists of 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 3 cr.**

The purpose of this course is to develop leadership

qualities for working with people in a recreation situation and also to provide knowledge and skill necessary for living in, enjoying, and preserving the out-of-doors. The course includes two overnight camping trips. Upon successful completion of the course, the student receives the American Camping Association Campcraft Certification. Three contact hours.

**LIS -- Library Sciences****LIS 2001 Use of Books and Libraries (T) 1 cr.**

This course is designed to provide students with the basic knowledge concerning the use of library materials and research methods. Students will be taught to use reference materials and given "hands-on" assignments. One contact hour (lecture/activity/lab).

**LIT -- Literature****LIT 2000 Introduction to Literature (T) 3 cr.**

Prerequisite: ENC 1101. This course emphasizes reading selections for understanding and appreciation. The course considers the major literary forms and their distinctive characteristics and conventions, principle literary themes, and different critical approaches. The purpose of the course is to increase personal satisfaction in literature and to prepare the student for further literary study. Three contact hours.

**LIT 2100 Great Ideas in World Literature (T) 3 cr.**

Prerequisites: ENC 1101. This course surveys universal themes and ideas in representative masterpieces of 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 2374 The Bible as Literature (T) 3 cr.**

Prerequisite: ENC 1101. This course is a study of the development of the Bible and its influence on literature and humanity. Three contact hours.

**LIT 2380 Introduction to Women in Literature (T) 3 cr.**

Prerequisite: ENC 1101. This course surveys nineteenth and twentieth century men and women writers depicting traditional and contemporary images of women. This course encourages an appreciation of how literature by and about women has contributed to the development of fiction and poetry in the English language. This course includes reading, speaking, and writing competencies. Three contact hours.

**MAC -- Mathematics: Calculus and Pre-calculus****MAC 1102 College Algebra (T) 3 cr.**

Prerequisite: MAT 1033 with a grade of "C" or better; or a satisfactory score on the placement test. MAC 1102 was designed for students who plan to major in fields that do not require the study of calculus. The major topics included in this course are exponents, roots, and radicals; equations



and inequalities; relations and functions; graphs; systems of equations and inequalities; and applications. A review of algebraic techniques is also included in this course as well as the algebraic, geometric, and measurement skills measured by CLAST. This course is not recommended for students who plan to major in mathematics, science, engineering, or computer and information sciences. Students cannot get credit for both MAC 1102 and MAC 1104. Three contact hours.

**MAC 1104 Precalculus College Algebra (T) 4 cr.**

Prerequisite: MAT 1033 with a grade of "C" or better; or a satisfactory score on placement test. MAC 1104 is recommended for students who plan to major in mathematics, science, engineering, computer and information sciences, or any other field that requires the study of calculus. The presentation in this course is more formal than that of MAC 1102 and there is heavy emphasis on functions and graphs. The major topics included in this course are a review of algebraic techniques; exponents, roots, and radicals; equations and inequalities; relations, functions, and graphs; exponential and logarithmic functions; systems of equations and inequalities; higher degree polynomials; matrices and determinants; and geometric applications. The algebraic, geometric, and measurement skills measured by CLAST are among the skills taught in this course. Students cannot get credit for both MAC 1102 and MAC 1104. Four contact hours.

**MAC 1114 College Trigonometry (T) 3 cr.**

Prerequisite: MAC 1104, with a grade of "C" or better or a strong high school algebra background. The major topics in this course are circular functions, solving triangles, trigonometric identities and functions, inverse relations and trigonometric equations, complex numbers, and polar coordinates. Three contact hours.

**MAC 2233 Calculus For Business and Social Sciences I (T) 3 cr.**

Prerequisite: MAC 1104 with a grade of "C" or better. This is the first course of the two-course calculus for business and social sciences sequence. It provides an introduction to differential and integral calculus with emphasis placed on applications from business, economics, and the social sciences. Topics from linear algebra will also be presented. This course cannot be used to satisfy degree requirements for students majoring in mathematics or engineering. Three contact hours.

**MAC 2234 Calculus For Business And Social Sciences II (T) 3 cr.**

Prerequisites: MAC 2233 or MAC 2311 with a grade of "C" or better. This course is the second course in the calculus for business and social sciences sequence. It provides a review of differentiation of algebraic, exponential, and logarithmic functions and covers major topics which include techniques of integration, an introduction to multivariable calculus, applications of integration to business and social sciences, and geometric applications. This course cannot be used to satisfy degree requirements for students majoring in mathematics or engineering. Three contact hours.

**MAC 2253 Technical Calculus 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. The instructor will introduce analytical geometry where needed to clarify the calculus. Three contact hours.

**MAC 2311 Calculus With Analytic Geometry I (T) 4 cr.**

Prerequisites: MAC 1104 with a grade of "C" or better, or two years of high school algebra with a grade of "C" or better. This course is designed for students who plan to major in mathematics, science, engineering, or computer sciences. It is the first course of a three-course calculus sequence. The major topics in this course are limits and continuity, differentiation of algebraic functions, applications of the derivative, antidifferentiation, introduction to integration, and applications of the definite integral. Four contact hours.

**MAC 2312 Calculus with Analytic Geometry II (T) 4 cr.**

Prerequisite: MAC 2311 with a grade of "C" or better and MAC 1114 or one semester of high school trigonometry with a grade of "C" or better. This is the second course of the three-course calculus sequence. It is a continuation of integration of algebraic functions as well as differentiation and integration of other transcendental functions, topics from analytic geometry, indeterminate forms and improper integrals, parametric equations, and polar coordinates. Four contact hours.

**MAC 2313 Calculus with Analytic Geometry III (T) 4 cr.**

Prerequisite: MAC 2312 with a grade of "C" or better. This is the third course in the calculus with analytic geometry sequence. Topics included in this course are infinite sequences and series, vectors and solid analytic geometry, calculus of functions of several variables, and multiple integrals with applications. Four contact hours.

**MAN -- Management**

---

**MAN 2021 Principles of Management (T) 3 cr.**

Suggested prerequisite: GEB 1011. This course consists of a detailed analysis of the management functions of planning, organizing, staffing, directing, and controlling as related to an organization. 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. Three contact hours.

**MAN 2050 Transportation Management and Theory (T) 3 cr.**

This course, designed for students advancing to the management stage in the transportation field, 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 (T) 3 cr.**

This course is the study of utilization of human resources to accomplish designated objectives. It includes recruiting, selecting, training, promoting, and motivating workers. Three contact hours.

**MAN 2800 Small Business Management (T) 3 cr.**

Prerequisites: MAN 2021, or ACG 2001, or ECO 2013. This course is designed for the student who is primarily interested in the ownership and management of the small business enterprise. It examines and analyzes the managerial function of planning, organizing, staffing, direction, and controlling as applied to the small business. Students also study retailing, wholesaling, manufacturing, and service-type business organizations. Three contact hours.

**MAP --Mathematics: Applied****MAP 2302 Differential Equations (T) 3 cr.**

Prerequisite: MAC 2312 with a grade of "C" or better. This course consists of a study of the methods of solving ordinary differential equations. The major topics include an introduction to differential equations, first-order differential equations, higher-order differential equations, systems of linear differential equations, the Laplace transform, and applications. Three contact hours.

**MAR – Marketing****MAR 1011 Principles of Marketing (T) 3 cr.**

This course is an introduction to the process of planning marketing programs for goods and services. Topics covered are marketing management and planning; environment for marketing strategies; market segmentation; market research; consumer buying behavior; product life cycles; pricing; advertising; sales; distribution channels; wholesaling; retailing; and international marketing. Three contact hours.

**MAS -- Mathematics: Algebraic Structures****MAS 2103 Elementary Linear Algebra (T) 3 cr.**

Prerequisite: MAC 1102 or MAC 1104 with a grade of "C" or better. The major topics in this course are systems of linear equations and matrices, determinants, vectors and vector spaces, linear transformations, eigenvalues and eigenvectors, and applications. Three contact hours.

**MAT – Mathematics: General****MAT 0002 Basic Mathematics (College Preparatory Course)**

This course is designed for students who lack the computational skills necessary for success in MAT 0024 Elementary Algebra. It provides instruction and practice in computational skills involving whole numbers, fractions, decimals, and signed numbers. Other major topics include percent, an introduction to algebra and measurement. Credit for this course does not apply toward an associate degree. Four credit hours, five contact hours: three lecture hours; two laboratory hours.

**MAT 0024 Elementary Algebra (College Preparatory Course)**

Prerequisite: MAT 0002 with a grade of "C" or better or a satisfactory score on placement test. This course is designed for students who have had little or no algebra. It does not apply toward an associate degree. The major topics in this course are sets, real numbers and their properties, exponents and polynomials, linear equations, and linear inequalities, as well as an introduction to factoring, radicals, and graphing. Three credit hours, three contact hours.

**MAT 1033 Intermediate Algebra (T) 3 cr.**

Prerequisite: MAT 0024 with a grade of "C" or better, or a satisfactory score on placement test. This course is designed for students who require additional skills in algebra before taking MAC 1102, MAC 1104, or MGF 1202. The major topics include sets and real numbers, linear equations and inequalities, polynomials and factoring, algebraic fractions (rational expressions), exponents, roots and radicals, quadratic equations and inequalities, relations and functions, graphs, and systems of linear equations. The algebraic skills measured by CLAST are among the skills taught in this course. This course does not satisfy the general education requirement for mathematics in most of the state universities. Three contact hours.

**MCB -- Microbiology****MCB 2013C Microbiology (T) 4 cr.**

Prerequisites: CHM 1020, 1032C, or 1045C, High School Chemistry. In addition, the student will benefit by taking APB 1150 or BSC 2010C prior to enrolling in MCB 2013C. This course consists of a study of the protista, viruses, rickettsias, and schizomycetes of medical and economic importance. Laboratory exercises introduce bacteriologic techniques and aseptic procedures using various microorganisms. Six contact hours: three studio hours; three clinical hours.

**MET -- Meteorology****MET 1010 Meteorology (T) 3 cr.**

This 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 1202 College Mathematics (T) 3 cr.**

Prerequisite: MAT 1033 with a grade of "C" or better, or a satisfactory score on placement test. This course is a survey of mathematics course designed for students who plan to major in fields that do not require an in-depth study of mathematics. The major topics introduced in this course are sets and Venn diagrams; inductive and deductive reasoning; symbolic logic; counting principles; permutations, and combinations; probability; descriptive statistics; and informal geometry and measurement. The arithmetic, geometry and measurement, probability and statistics, and logical reasoning skills measured by CLAST are among the skills taught in this course. Three contact hours.



**MGF 2204 Topics in Finite Mathematics (T) 1 cr.**

Prerequisite: MAT 1033 with a grade of "C" or better, or a satisfactory score on placement test. This course introduces students to the basic principles of symbolic logic; the theory of probability; some of the statistical methods used in the collection, presentation, description, and interpretation of data; and informal geometry. It is designed to focus attention on the importance of logical thinking, to provide a foundation for the mathematical study of uncertainties, to familiarize students with the terminology and concepts of both statistics and informal geometry. MGF 2204 is intended for students who are planning to take CLAST and need additional preparation. One contact hour (for 15 weeks); or three contact hours (for 5 weeks).

**MKA -- Marketing Applications****MKA 1021 Salesmanship (T) 3 cr.**

This course, an introduction to the art of effective salesmanship, analyzes and studies types and problems of psychology of sales situations. Buying motives, customer approach, and sales techniques. Three contact hours.

**MLT -- Medical Laboratory Technology****MLT 1022C Introduction to Health Technology 3 cr.**

The course enables 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).

**MLT 1300C Hematology 4 cr.**

Prerequisite: MLT 1022C or permission of department. This course emphasizes instruction in the theories and techniques of routine hematology; The hematopoietic system, Clinical correlations, and related laboratory procedures are included in the course content. Peripheral blood cell enumeration, cell identification and morphology, and hemo- globin analysis are emphasized. Six contact hours (lecture/laboratory).

**MLT 1330C Hemostasis 2 cr.**

Prerequisite: MLT 1300C. This course presents the principles and laboratory procedures related to the assessment of hemostasis; the functions of the vasculature, platelets, coagulation factors, and the fibrinolytic system are included. Three contact hours (lecture/laboratory).

**MLT 1405C Medical Microbiology 4 cr.**

Prerequisite: MCB 2013C or permission of department. This course presents the student with instruction in the theory, taxonomy, identification, clinical relevance, and laboratory procedures associated with the microbiological agents of infectious disease; clinically significant bacteria, mycobacteria, mycoplasma, chlamydia, rickettsia, and viruses are included in the course. Methods of susceptibility testing are also included. Six contact hours (lecture/ laboratory).

**MLT 1440C Parasitology/Mycology 2 cr.**

Prerequisite: Permission of department. This course presents the student with instruction in the taxonomy, life cycles, identification, and pathogenesis of the clinically significant parasitic agents; the course also includes the taxonomy, identification, pathogenesis and laboratory procedures associated with the clinically significant fungi. Three contact hours (lecture/laboratory).

**MLT 2150C Clinical Correlations 3 cr.**

Prerequisites: MLT 1300C, MLT 1405C, MLT 2610C. This course presents selected topics in advanced laboratory techniques, together with their significances in the diagnosis of diseases. The student builds on a fundamental knowledge of clinical laboratory analysis and human pathology to understand more complex laboratory diagnostic procedures in the Areas of Hematology, Endocrinology, toxicology, and Microbiology. Four contact hours (lecture/ laboratory).

**MLT 2230C Clinical Microscopy 2 cr.**

Prerequisites: MLT 1300C, MLT 2610C. This course instructs the student in the evaluation and clinical correlations of urinalysis and selected other body fluids; included in this course is the study of renal function, renal diseases, cerebrospinal fluid, transudates, exudates, seminal fluid, amniotic fluid, and gastric analysis. Three contact hours (lecture/ laboratory).

**MLT 2500C Clinical Immunology 4 cr.**

Prerequisite: MLT 1405C. This course relates the biology of the immune response to the clinical manifestations of selected diseases. Course content includes: antigen-antibody reactions, immuno-globulin structures and functions, lymphocyte interactions. As well, the clinical significance and laboratory procedures related to HTLV viruses, syphilis, hepatitis, inflammatory conditions, bacterial & viral pathogens, autoimmune disorders, immunogenetics, and chromosomal disorders are included. Six contact hours (lecture/laboratory).

**MLT 2525C Immunohematology 3 cr.**

Prerequisite: MLT 2500C. This course relates the concepts of immunology to Blood banking procedures using the guidelines of the American Association of Blood Banking (AABB). The course content includes: antigen-antibody reactions, immunoglobulin structures and functions, complement interaction, clinically significant blood group systems, antibody detection and identification, immunologic disease of the newborn, compatibility testing, and component therapy. Four contact hours (lecture/laboratory).

**MLT 2610C Clinical Chemistry 4 cr.**

Prerequisites: MLT 1022C, CHM 1032C. This course instructs the student in the theory, clinical correlations, and laboratory procedures related to the study of proteins, enzymes, carbohydrates lipids, non-protein nitrogen compounds, and hormones. Included in the course are quality assurance principles, laboratory mathematics, and the study of hepatic, renal and endocrine profiles. Six contact hours (lecture/laboratory).

**MLT 2760C Principles of Clinical Instrumentation** 3 cr.

Prerequisite: permission of program director. This course presents the principles of operation and the laboratory applications of selected instruments commonly used in clinical analyses. Students will learn instrument operation, maintenance, and quality control parameters for major instruments used in Hematology, Microbiology, and Clinical Chemistry. Automation and computerization are included. Four contact hours (lecture/laboratory).

**MLT 2800L Clinical Practicum I** 10 cr.

Prerequisite: permission of program director. Assigned to a clinical affiliate of the Medical Laboratory Technology Program, the student will be instructed in current laboratory procedures and instrument use appropriate for developing career entry level skills. The supervised learning experiences are under the coordination and responsibility of the program faculty. Twenty-seven and one-half contact hours (laboratory).

**MLT 2801L Clinical Practicum II** 10 cr.

Prerequisites: MLT 2800L. This course is a continuation of MLT 2800L, Clinical Practicum I. Students continue in their assigned clinical affiliate under the coordination and responsibility of the program. Twenty-seven and one-half contact hours (laboratory).

**MMC -- Mass Media Communications****MMC 1000 Introduction to Mass Communications (T)** 3 cr.

The course is an introduction to mass-communications and includes the history and development of mass media with emphasis on newspaper, radio, television, and magazines. Effective communications rules and responsibilities of mass communications will be taught. Three contact hours.

**MMC 2100 Writing for Mass Communication (T)** 3 cr.

Prerequisite: ENC 1101. This course provides fundamental instruction and practice in developing and writing news stories for print and broadcast media. Three contact hours.

**MNA – Management: Applied****MNA 1392 Postal Management - Customer Service** 3 cr.

This course is designed to prepare students for employment in management positions in the Postal Service as postmasters, mail superintendents, supervisors of delivery and collection, as well as provide supplemental training to persons previously and currently employed in these occupations. Topics to be covered are analysis of real unit operations and an indepth study of rural and city delivery systems. Three contact hours.

**MNA 1394 Postal Management - Finance** 3 cr.

This course is designed to provide extensive under-

standing of financial management principles in the U.S. Postal Service. Three contact hours.

**MNA 2395 Postal Management - Mail Processing I** 3 cr.

This course is an introduction to the various aspects of processing U.S. mail. The major emphasis is on manual mail processing operations. Topics studied include: distribution, dispatch and routing procedures, scheduling and staffing, schemes utilization, attendance control, case diagrams, safety and operational planning. Three contact hours.

**MNA 2396 Postal Management - Mail Processing II** 3 cr.

This course is an introduction to mechanized and automated mail processing procedures. This course will provide an overview of the optical character reader, bar code sorter, multi-position letter sorting machine, multi-position flat sorting machine, sack sorter and air mail facility. Emphasis will also be given to the issues involved in the supervision of a mail processing operation. Discussion topics will include safety, planning, productivity, quality control, training, EEO and Management style. Three contact hours.

**MNA 2397 Postal Management - Employee Relations** 3 cr.

Prerequisite: MAN 2300 may be desirable. This course will provide the student with a basic understanding of Postal Personnel administration. It will provide background which will be useful to the potential postal manager in administering the hiring process, obtaining applicants and selecting candidates for assignment and promotion. The student will gain an understanding as well as an introduction to the various handbooks and manuals used as regulation reference points. The course will include mock interviews for selection and promotion procedures. Three contact hours.

**MNA 2398 Postal Management - Labor Relations** 3 cr.

This course is an introduction to labor relations as it applies to the United States Postal Service. The course is descriptive of the roles of both management and postal unions as they interpret policies and regulations in the context of the postal environment. The course will present the bargaining agreements negotiated with the major postal unions and the day-to-day interpretation of those agreements. The subject will be presented by classroom lecture, reading of the text (EL901, EL902, EL903), discussions, class projects including a term paper, oral presentation to the class and role playing exercises. Three contact hours.

**MNA 2400 Labor Relations (T)** 3 cr.

This course is an introduction to labor relations. It presents an overview of labor relations beginning with the history of the subject, progressing through developments in the field, federal laws and recent trends. The course is designed to present a definition of labor relations and a working knowledge of the basic concepts involved. Three contact hours.



## **MTB -- Mathematics: Technical and Business**

---

### **MTB 1321 Technical Algebra 3 cr.**

This course in applied mathematics involves principles and laws of basic algebra, solution of linear equations, and basic analytical geometry. In each presentation, students develop solutions to problems of a technical nature. Three contact hours.

### **MTB 1322 Technical Trigonometry (T) 3 cr.**

Prerequisite: MAC 1104 or MTB 1321. A continuation of MTB 1321, this course covers the laws and principles of trigonometry, vector analysis, complex numbers and geometric consideration of trigonometry functions, emphasizes practical work in solution of engineering problems. Three contact hours.

## **MTR -- Metal Trades**

---

### **MTR 1100 Welding for Related Trades 4 cr.**

This course, for students not enrolled in a welding program, provides the student with a basic introduction to those welding skills used in related trades and a practical understanding of welding safety, arc welding fundamentals, oxyacetylene welding fundamentals, oxyacetylene cutting skills, brazing, and silver soldering. The course stresses in-class practice to develop the skills necessary to produce quality welds in the flat position on mild carbon steel. Eight contact hours. (Laboratory)

## **MUSIC COURSES**

### **MUC -- Music: Composition**

---

#### **MUC 1301 Introduction to Electronic Music (T) 2 cr.**

Prerequisite: Approval of professor. This beginning course in the history and practice of electronic music includes laboratory work with tape recorders and synthesizers. Three contact hours (rehearsal).

### **MUE -- Music: Education**

---

#### **MUE 1440 String Techniques (T) 1 cr.**

Open to music majors, this course teaches basic performance skills on violin, viola, violin-cello, or double bass. Two contact hours (rehearsal).

#### **MUE 1450 Woodwind Techniques (T) 1 cr.**

The course, open to music majors, teaches basic performance skills on clarinet or flute. Two contact hours (rehearsal).

#### **MUE 1460 Brass Techniques (T) 1 cr.**

Prerequisite: Open to music major. This course, open to music majors, teaches basic performance skills on trumpet or trombone. Two contact hours (rehearsal).

#### **MUE 1470 Percussion Techniques (T) 1 cr.**

Open to music majors, this course teaches basic performance skills on percussion instruments with emphasis on rudimental snare drumming. Two contact hours (rehearsal).

## **MUG -- Music: Conduction**

---

### **MUG 1201 Basic Conducting (Choral) (T) 2 cr.**

Prerequisite: MUT 1121 and/or consent of professor. This course provides the student with an introduction to basic techniques used in directing choral rehearsals and performances. Three contact hours (rehearsal).

## **MUH -- Music: History**

---

### **MUH 2051 Folk and Traditional Music Of World Cultures (T) 3 cr.**

This course is 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 2052 Music in Contemporary Cultures (T) 3 cr.**

Prerequisite: ANT 2410. Open to all students as an elective. Music in Contemporary Cultures is 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 2110 Survey of Music History (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course consists of a study of music from the early medieval period to the present day with an emphasis upon the stylistic trends of each period. This course, recommended for music majors only, includes reading and writing competencies. Three contact hours.

### **MUH 2561 Afro-American Music: A Vocal Study (T) 3 cr.**

Open to all students as an elective, this course studies 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. To facilitate courage, the course emphasizes vocal idioms, including minstrelsy, blues, rhythm and blues, soul, rock, gospel and jazz. Three contact hours.

## **MUL -- Music: Literature**

---

### **MUL 1010 Music Appreciation (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course, designed for students with little or no musical training, combines a limited amount of training in music technology with extensive listening. This course includes reading and writing competencies. Three contact hours.

## **MUM -- Music: Commercial**

---

### **MUM 1500 Recording Techniques I (T) 3 cr.**

This course is open to all students. It offers the beginner basic information in the art of recording vocal and instru-

mental 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.

**MUM 1601 Recording Techniques II (T) 3 cr.**

Prerequisite: MUM 1600. This course is continuation of Recording Techniques I with emphasis on a more thorough understanding of the function of each piece of equipment in the recording studio. It offers the second semester student more advanced information on the mix-down process. This course has a \$15.00 materials fee. Six contact hours: two lecture hours; four studio hours.

**MUN -- Music: Music Ensembles**

**MUN 1130 Symphonic Band (T) 1 cr.**

Prerequisite: Permission of instructor/audition. This course, a requirement for all woodwind, brass, and percussion majors, includes traditional and contemporary band literature. The music department urges all students with previous experience and permission of the instructor to participate. Students may select this course for credit each semester, with up to four credits counting toward the AA degree. Five contact hours (rehearsal).

**MUN 1280 Community Orchestra (T) 1 cr.**

Prerequisite: open by audition to members of the community. 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 to present concerts each term. Membership is by permission of the director and/or audition; string majors must participate. Students may elect to take this course for credit each semester, with up to four credits counting toward AA degree. Two contact hours (rehearsal).

**MUN 1340 Chamber Choir (T) 1 cr.**

Prerequisite: Previous choral experience and audition, and by director's permission. Corequisite: Enrollment in MUNB 1310. The repertoire of the Chamber Choir includes sacred and secular compositions, with an emphasis on a capella literature of the 17th through 20th centuries. With membership limited to fifteen (15) to twenty (20) singers, a student may take this course each semester, with up to four (4) elective credits counting toward the AA degree. Three contact hours (rehearsal).

**MUN 1380 Community Chorus, Jacksonville Concert Chorale (T) 1 cr.**

Prerequisite: Open by audition to members of the community. Repertoire for this course includes secular and sacred major works for chorus and orchestra, as well as shorter compositions. The student may elect this course each semester for credit, with up to four credits counting toward the AA degree, or Continuing Education credit under Adult Education. Two contact hours (rehearsal).

**MUN 1410 String Ensemble (T) 1 cr.**

Prerequisite: Open to all students who have experience

as players on bowed string instruments, with permission of professor. The department encourages all students who have experience as players on bowed string instruments to audition. The String Ensemble will perform the standard literature for string ensembles both independently and in conjunction with other music performing organizations. Students may elect to take this course for credit each semester, with up to four credits counting toward the AA degree. Three contact hours (rehearsal).

**MUN 1450 Piano Ensemble and Accompanying (T) 1 cr.**

Prerequisite: Open to piano majors and principals by approval of the professor. This course provides the student with an introduction to multiple piano skills, chamber music skills, and the art of piano accompanying, both choral and instrumental. May be repeated for credit. Approval of the professor is required for piano minors and non-music majors. Three contact hours (rehearsal).

**MUN 1710 Jazz-Rock Ensemble (T) 1 cr.**

Prerequisite: Permission of the director/audition. Corequisite: MUN 1130 for woodwind, brass, and percussion players (unless waived by director). The repertoire includes various styles from jazz and popular literature. The student may select this course for credit each semester, with up to four credits counting toward AA degree. Three contact hours (rehearsal).

**MUNA 1310 College Chorus (T) 1 cr.**

Open to all college students, this course includes many styles of choral music in the repertoire. Students may elect to take this course for credit each semester, with up to four credits counting toward AA degree. Three contact hours (rehearsal).

**MUNB 1310 College Chorale (T) 1 cr.**

Prerequisite: Permission of director; 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. The student may elect this course for credit each semester, with up to four credits counting toward the AA degree. Five contact hours.

**MUO -- Music: Opera/Musical Theatre**

**MUO 1001 Music Theatre Workshop (T) 1 cr.**

Prerequisite: open by audition. This course is open by audition to persons interested in theatre and music in the areas of performance and technical operation. A student may elect to take this course 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 1010 Student Recital (T) 1 cr.**

This course is required for all music majors. In conjunction with one class meeting each week, the student must attend an announced number of FCCJ related concerts. Each music major enrolled for two hours of applied music is



to perform in student recital at least once during the academic year. Meeting hour is flexible to coincide with special performance time. One contact hour.

## **MUT -- Music: Theory**

---

### **MUT 1001 Introduction to Music Theory (T) 3 cr.**

This 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, and diction. Three contact hours.

### **MUT 1121 Music Theory I (T) 4 cr.**

Prerequisite: MUT 1001 or satisfactory score on placement test or permission of instructor. Corequisite: Music majors must also enroll in Applied Music, MUS 1010 and a performing organization. This elementary course in music theory and the principles underlying all music includes music terminology, notation, harmony, melody, and rhythm in addition to sight singing and ear training. Designed for music majors, the course is also open to qualified students. Five contact hours: three lecture hours; two rehearsal hours.

### **MUT 1122 Music Theory II (T) 4 cr.**

Prerequisite: MUT 1121. Corequisite: Music majors must also enroll in Applied Music, MUS 1010, and a performing organization. This basic course, a continuation of MUT 1121, includes music terminology, notation, harmony, melody, rhythm, and form as well as sight singing and ear training. Designed for music majors, the course is also open to qualified students. Five contact hours: three lecture hours; two rehearsal hours.

### **MUT 2126 Music Theory III (T) 4 cr.**

Prerequisite: MUT 1122. Corequisite: Music majors must also enroll in Applied Music, MUS 1010, and a performing organization. This continuing course in the techniques of analysis and part writing in vocal, keyboard and instrumental styles includes advanced tertian harmony, modulation, sequence, and phrase, and part forms along with sight singing and ear training. Designed for music majors, the course is also open to qualified students. Five contact hours: three lecture hours; two rehearsal hours.

### **MUT 2127 Music Theory IV (T) 4 cr.**

Prerequisite: MUT 2126. Corequisite: Music majors must also enroll in Applied Music, MUS 1010, and a performing organization. This continuing course in music theory includes altered and chromatic chords, extension of tonality, 20th century harmonic, melodic, and rhythmic styles, also with advanced sight singing and ear training. Designed for music majors, this course is also open to qualified students. Five contact hours: three lecture hours; two rehearsal hours.

### **MUT 2231 Keyboard Harmony I (T) 1 cr.**

Prerequisite: MUT 2127. Required of all music majors. This course includes development of skills at the piano with emphasis upon harmonization of melodies, modulation, transposition, and improvisation. Two contact hours.

### **MUT 2232 Keyboard Harmony II (T) 1 cr.**

Prerequisite: MUT 2231. This course is a continuation of MUT 2231. Two contact hours.

## **MVK -- Music: Keyboard**

---

### **MVKA 1111 Class Piano I (T) 1 cr.**

This course for beginning piano students meets in groups, with emphasis placed on music reading and elementary techniques. This course is required for all music majors, unless exempted. Two contact hours (rehearsal).

### **MVKB 1111 Class Piano II (T) 1 cr.**

Prerequisite: MVKA 1111. This course is a continuation of MVKA 1111 and is a requirement for all music majors. Two contact hours (rehearsal).

### **MVKA 2121 Class Piano III (T) 1 cr.**

Prerequisite: MVKB 1111. This course is a continuation of MVKB 1111 and is a requirement for all music majors. Two contact hours (rehearsal).

### **MVKB 2121 Class Piano IV (T) 1 cr.**

Prerequisite: MVKA 2121. This course is a continuation of MVKA 2121. Two contact hours (rehearsal).

### **MVKA 2621 Basic Piano Pedagogy I (T) 2 cr.**

This introductory class prepares the student for professional class piano teaching at the beginner and early elementary level. Three contact hours.

### **MVKB 2621 Basic Piano Pedagogy II (T) 2 cr.**

This class, a continuation of piano pedagogy, prepares students for professional piano teaching at the upper elementary and intermediate levels through lectures, demonstrations and observations. Three contact hours.

## **MVS -- Music: Strings**

---

### **MVSA 1116 Classic Guitar I (T) 1 cr.**

This 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 Classic Guitar II (T) 1 cr.**

Prerequisite: MVSA 1116. This course is a continuation of MVSA 1116, Class Guitar I, perfecting and advancing skills learned therein. Two contact hours (rehearsal).

### **MVSA 2126 Classic Guitar III (T) 1 cr.**

Prerequisite: MVSB 1116. This course is a continuation of MVSB 1116, perfecting and advancing skills learned therein. Two contact hours (rehearsal).

### **MVSB 2126 Classic Guitar IV (T) 1 cr.**

Prerequisite: MVSA 2126. This course is a continuation of MVSA 2126, perfecting and advancing skills learned therein. Two contact hours (rehearsal).

**MVV – Music: Voice****MVVA 1111 Classic Voice I (T) 1 cr.**

This course is for singers wishing to further their vocal skills and instrumentalists wishing a fundamental vocal knowledge. The course emphasizes correct diction and tone production with student's receiving individual aid. Two contact hours (rehearsal).

**MVVB 1111 Classic Voice II (T) 1 cr.**

Prerequisite: MVVA 1111. This course is a continuation of MVVA 1111. Two contact hours (rehearsal).

**MVVA 2121 Classic Voice III (T) 1 cr.**

Prerequisite: MVVB 1111. This course is for singers wishing to develop vocal skills beyond elementary level of correct diction and tone production. The course is also open to instrumentalists wishing more than a basic vocal knowledge and competency level. This course meets as a class, yet emphasizes individual attention. Two contact hours (rehearsal).

**MVVB 2121 Classic Voice IV (T) 1 cr.**

Prerequisite: MVVA 2121. This course is a continuation of MVVA 2121. Two contact hours (rehearsal).

**APPLIED MUSIC COURSES****MVB – Music: Brasses  
Baritone****MVBA 1014 Applied Preparatory Baritone I (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 2 cr.**

Prerequisite: MVBA 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.

**MVBA 1214 Applied Secondary Baritone I (T) 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 1214 Applied Secondary Baritone II (T) 1 cr.**

Prerequisite: MVBA 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.

**MVBA 2224 Applied Secondary Baritone III (T) 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 (T) 1 cr.**

Prerequisite: MVBA 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.

**MVBA 1414 Applied Major Baritone I (T) 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 (T) 3 cr.**

Prerequisite: MVBA 1414. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVBA 2424 Applied Major Baritone III (T) 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 (T) 3 cr.**

Prerequisite: MVBA 2424. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVW – Music: Woodwinds  
Bassoon****MVWA 1014 Applied Preparatory  
Bassoon I (T) 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.



and inequalities; relations and functions; graphs; systems of equations and inequalities; and applications. A review of algebraic techniques is also included in this course as well as the algebraic, geometric, and measurement skills measured by CLAST. This course is not recommended for students who plan to major in mathematics, science, engineering, or computer and information sciences. Students cannot get credit for both MAC 1102 and MAC 1104. Three contact hours.

**MAC 1104 Precalculus College Algebra (T) 4 cr.**

Prerequisite: MAT 1033 with a grade of "C" or better; or a satisfactory score on placement test. MAC 1104 is recommended for students who plan to major in mathematics, science, engineering, computer and information sciences, or any other field that requires the study of calculus. The presentation in this course is more formal than that of MAC 1102 and there is heavy emphasis on functions and graphs. The major topics included in this course are a review of algebraic techniques; exponents, roots, and radicals; equations and inequalities; relations, functions, and graphs; exponential and logarithmic functions; systems of equations and inequalities; higher degree polynomials; matrices and determinants; and geometric applications. The algebraic, geometric, and measurement skills measured by CLAST are among the skills taught in this course. Students cannot get credit for both MAC 1102 and MAC 1104. Four contact hours.

**MAC 1114 College Trigonometry (T) 3 cr.**

Prerequisite: MAC 1104, with a grade of "C" or better or a strong high school algebra background. The major topics in this course are circular functions, solving triangles, trigonometric identities and functions, inverse relations and trigonometric equations, complex numbers, and polar coordinates. Three contact hours.

**MAC 2233 Calculus For Business and Social Sciences I (T) 3 cr.**

Prerequisite: MAC 1104 with a grade of "C" or better. This is the first course of the two-course calculus for business and social sciences sequence. It provides an introduction to differential and integral calculus with emphasis placed on applications from business, economics, and the social sciences. Topics from linear algebra will also be presented. This course cannot be used to satisfy degree requirements for students majoring in mathematics or engineering. Three contact hours.

**MAC 2234 Calculus For Business And Social Sciences II (T) 3 cr.**

Prerequisites: MAC 2233 or MAC 2311 with a grade of "C" or better. This course is the second course in the calculus for business and social sciences sequence. It provides a review of differentiation of algebraic, exponential, and logarithmic functions and covers major topics which include techniques of integration, an introduction to multivariable calculus, applications of integration to business and social sciences, and geometric applications. This course cannot be used to satisfy degree requirements for students majoring in mathematics or engineering. Three contact hours.

**MAC 2253 Technical Calculus 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. The instructor will introduce analytical geometry where needed to clarify the calculus. Three contact hours.

**MAC 2311 Calculus With Analytic Geometry I (T) 4 cr.**

Prerequisites: MAC 1104 with a grade of "C" or better, or two years of high school algebra with a grade of "C" or better. This course is designed for students who plan to major in mathematics, science, engineering, or computer sciences. It is the first course of a three-course calculus sequence. The major topics in this course are limits and continuity, differentiation of algebraic functions, applications of the derivative, antidifferentiation, introduction to integration, and applications of the definite integral. Four contact hours.

**MAC 2312 Calculus with Analytic Geometry II (T) 4 cr.**

Prerequisite: MAC 2311 with a grade of "C" or better and MAC 1114 or one semester of high school trigonometry with a grade of "C" or better. This is the second course of the three-course calculus sequence. It is a continuation of integration of algebraic functions as well as differentiation and integration of other transcendental functions, topics from analytic geometry, indeterminate forms and improper integrals, parametric equations, and polar coordinates. Four contact hours.

**MAC 2313 Calculus with Analytic Geometry III (T) 4 cr.**

Prerequisite: MAC 2312 with a grade of "C" or better. This is the third course in the calculus with analytic geometry sequence. Topics included in this course are infinite sequences and series, vectors and solid analytic geometry, calculus of functions of several variables, and multiple integrals with applications. Four contact hours.

**MAN -- Management**

---

**MAN 2021 Principles of Management (T) 3 cr.**

Suggested prerequisite: GEB 1011. This course consists of a detailed analysis of the management functions of planning, organizing, staffing, directing, and controlling as related to an organization. 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. Three contact hours.

**MAN 2050 Transportation Management and Theory (T) 3 cr.**

This course, designed for students advancing to the management stage in the transportation field, 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 (T) 3 cr.**

This course is the study of utilization of human resources to accomplish designated objectives. It includes recruiting, selecting, training, promoting, and motivating workers. Three contact hours.

**MAN 2600 Small Business Management (T) 3 cr.**

Prerequisites: MAN 2021, or ACG 2001, or ECO 2013. This course is designed for the student who is primarily interested in the ownership and management of the small business enterprise. It examines and analyzes the managerial function of planning, organizing, staffing, direction, and controlling as applied to the small business. Students also study retailing, wholesaling, manufacturing, and service-type business organizations. Three contact hours.

**MAP --Mathematics: Applied****MAP 2302 Differential Equations (T) 3 cr.**

Prerequisite: MAC 2312 with a grade of "C" or better. This course consists of a study of the methods of solving ordinary differential equations. The major topics include an introduction to differential equations, first-order differential equations, higher-order differential equations, systems of linear differential equations, the Laplace transform, and applications. Three contact hours.

**MAR – Marketing****MAR 1011 Principles of Marketing (T) 3 cr.**

This course is an introduction to the process of planning marketing programs for goods and services. Topics covered are marketing management and planning; environment for marketing strategies; market segmentation; market research; consumer buying behavior; product life cycles; pricing; advertising; sales; distribution channels; wholesaling; retailing; and international marketing. Three contact hours.

**MAS -- Mathematics: Algebraic Structures****MAS 2103 Elementary Linear Algebra (T) 3 cr.**

Prerequisite: MAC 1102 or MAC 1104 with a grade of "C" or better. The major topics in this course are systems of linear equations and matrices, determinants, vectors and vector spaces, linear transformations, eigenvalues and eigenvectors, and applications. Three contact hours.

**MAT – Mathematics: General****MAT 0002 Basic Mathematics (College Preparatory Course)**

This course is designed for students who lack the computational skills necessary for success in MAT 0024 Elementary Algebra. It provides instruction and practice in computational skills involving whole numbers, fractions, decimals, and signed numbers. Other major topics include percent, an introduction to algebra and measurement. Credit for this course does not apply toward an associate degree. Four credit hours, five contact hours: three lecture hours; two laboratory hours.

**MAT 0024 Elementary Algebra (College Preparatory Course)**

Prerequisite: MAT 0002 with a grade of "C" or better or a satisfactory score on placement test. This course is designed for students who have had little or no algebra. It does not apply toward an associate degree. The major topics in this course are sets, real numbers and their properties, exponents and polynomials, linear equations, and linear inequalities, as well as an introduction to factoring, radicals, and graphing. Three credit hours, three contact hours.

**MAT 1033 Intermediate Algebra (T) 3 cr.**

Prerequisite: MAT 0024 with a grade of "C" or better, or a satisfactory score on placement test. This course is designed for students who require additional skills in algebra before taking MAC 1102, MAC 1104, or MGF 1202. The major topics include sets and real numbers, linear equations and inequalities, polynomials and factoring, algebraic fractions (rational expressions), exponents, roots and radicals, quadratic equations and inequalities, relations and functions, graphs, and systems of linear equations. The algebraic skills measured by CLAST are among the skills taught in this course. This course does not satisfy the general education requirement for mathematics in most of the state universities. Three contact hours.

**MCB -- Microbiology****MCB 2013C Microbiology (T) 4 cr.**

Prerequisites: CHM 1020, 1032C, or 1045C, High School Chemistry. In addition, the student will benefit by taking APB 1150 or BSC 2010C prior to enrolling in MCB 2013C. This course consists of a study of the protista, viruses, rickettsias, and schizomycetes of medical and economic importance. Laboratory exercises introduce bacteriologic techniques and aseptic procedures using various microorganisms. Six contact hours: three studio hours; three clinical hours.

**MET -- Meteorology****MET 1010 Meteorology (T) 3 cr.**

This 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 1202 College Mathematics (T) 3 cr.**

Prerequisite: MAT 1033 with a grade of "C" or better, or a satisfactory score on placement test. This course is a survey of mathematics course designed for students who plan to major in fields that do not require an in-depth study of mathematics. The major topics introduced in this course are sets and Venn diagrams; inductive and deductive reasoning; symbolic logic; counting principles; permutations, and combinations; probability; descriptive statistics; and informal geometry and measurement. The arithmetic, geometry and measurement, probability and statistics, and logical reasoning skills measured by CLAST are among the skills taught in this course. Three contact hours.



**MVWB 1014 Applied Preparatory Bassoon II (T) 2 cr.**

Prerequisite: MVWA 1014. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

**MVWA 1314 Applied Principal Bassoon I (T) 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 1314 Applied Principal Bassoon II (T) 2 cr.**

Prerequisite: MVWA 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.

**MVWA 2324 Applied Principal Bassoon III (T) 2 cr.**

Prerequisite: MVWB 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.

**MVWB 2324 Applied Principal Bassoon IV (T) 2 cr.**

Prerequisite: MVWA 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.

**MVWA 1214 Applied Secondary Bassoon I (T) 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 1214 Applied Secondary Bassoon II (T) 1 cr.**

Prerequisite: MVWA 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.

**MVWA 2224 Applied Secondary Bassoon III (T) 1 cr.**

Prerequisite: MVWB 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.

**MVWB 2224 Applied Secondary Bassoon IV (T) 1 cr.**

Prerequisite: MVWA 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.

**MVWA 1414 Applied Major Bassoon I (T) 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 1414 Applied Major Bassoon II (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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.

**MVSA 2223 Applied Secondary Cello III (T) 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 (T) 1 cr.**

Prerequisite: MVSA 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.

**MVSA 1413 Applied Major Cello I (T) 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 (T) 3 cr.**

Prerequisite: MVSA 1413. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSA 2423 Applied Major Cello III (T) 3 cr.**

Prerequisite: MVSB 1413. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSB 2423 Applied Major Cello IV (T) 3 cr.**

Prerequisite: MVSA 2423. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVW -- Music: Woodwinds (Continued)  
Clarinet**

**MVWA 1013 Applied Preparatory Clarinet I (T) 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 (T) 2 cr.**

Prerequisite: MVWA 1013. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

**MVWA 1313 Applied Principal Clarinet I (T) 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 (T) 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 2323 Applied Principal Clarinet III (T) 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 (T) 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 (T) 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 (T) 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 (T) 1 cr.**

Prerequisite: MVWB 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.

**MVWB 2223 Applied Secondary Clarinet IV (T) 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 (T) 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 (T) 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 (T) 3 cr.**

Prerequisite: MVWB 1413. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.



**MVWB 2423 Applied Major Clarinet IV (T)** 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)**  
**Flute**

---

**MVWA 1011 Applied Preparatory Flute I (T)** 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 (T)** 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 (T)** 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 (T)** 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 (T)** 2 cr.  
Prerequisite: MVWB 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 (T)** 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 (T)** 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 (T)** 1 cr.  
Prerequisite: MVWA 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.

**MVWA 2221 Applied Secondary Flute III (T)** 1 cr.  
Prerequisite: MVWB 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.

**MVWB 2221 Applied Secondary Flute IV (T)** 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.). Two half-hour lessons a week.

**MVWA 1411 Applied Major Flute I (T)** 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 (T)** 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 (T)** 3 cr.  
Prerequisite: MVWB 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 (T)** 3 cr.  
Prerequisite: MVWA 2421. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVB -- Music: Brasses (Continued)**  
**French Horn**

---

**MVBA 1012 Applied Preparatory French Horn I (T)** 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.

**MVBB 1012 Applied Preparatory French Horn II (T)** 2 cr.  
Prerequisite: MVBA 1012. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

**MVBA 1312 Applied Principal French Horn I (T)** 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 1312 Applied Principal French Horn II (T)** 2 cr.  
Prerequisite: MVBA 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.

**MVBA 2322 Applied Principal French Horn III (T)** 2 cr.  
Prerequisite: MVBB 1312. Third semester of private les-

sons 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 2322 Applied Principal French**

**Horn IV (T) 2 cr.**

Prerequisite: MVBA 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.

**MVBA 1212 Applied Secondary French**

**Horn I (T) 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 1212 Applied Secondary French**

**Horn II (T) 1 cr.**

Prerequisite: MVBA 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.

**MVBA 2222 Applied Secondary French**

**Horn III (T) 1 cr.**

Prerequisite: MVBB 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.

**MVBB 2222 Applied Secondary French**

**Horn IV (T) 1 cr.**

Prerequisite: MVBA 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.

**MVBA 1412 Applied Major French**

**Horn I (T) 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 (T) 3 cr.**

Prerequisite: MVBA 1412. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVBA 2422 Applied Major French**

**Horn III (T) 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 (T) 3 cr.**

Prerequisite: MVBA 2422. Fourth semester of private

lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVS -- Music: Strings (Continued)  
Guitar**

**MVSA 1016 Applied Preparatory Guitar I (T) 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.

**MVSB 1016 Applied Preparatory Guitar II (T) 2 cr.**

Prerequisite: MVSA 1016. Second 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 I (T) 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 1316 Applied Principal Guitar II (T) 2 cr.**

Prerequisite: MVSA 1316. 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 2326 Applied Principal Guitar III (T) 2 cr.**

Prerequisite: MVSB 1316. 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 2326 Applied Principal Guitar IV (T) 2 cr.**

Prerequisite: MVSA 2326. 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 1216 Applied Secondary Guitar I (T) 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 1216 Applied Secondary Guitar II (T) 1 cr.**

Prerequisite: MVSA 1216. 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 2226 Applied Secondary Guitar III (T) 1 cr.**

Prerequisite: MVSB 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.



**MVSB 2226 Applied Secondary Guitar IV (T) 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 (T) 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 1416 Applied Major Guitar II (T) 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 (T) 3 cr.**

Prerequisite: MVSB 1416. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSB 2426 Applied Major Guitar IV (T) 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 (T) 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 1012 Applied Preparatory Oboe II (T) 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 (T) 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 1312 Applied Principal Oboe II (T) 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 (T) 2 cr.**

Prerequisite: MVWB 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.

**MVWB 2322 Applied Principal Oboe IV (T) 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 (T) 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 1212 Applied Secondary Oboe II (T) 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 (T) 1 cr.**

Prerequisite: MVWB 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.

**MVWB 2222 Applied Secondary Oboe IV (T) 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 (T) 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 1412 Applied Major Oboe II (T) 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 (T) 3 cr.**

Prerequisite: MVWB 1412. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVWB 2422 Applied Major Oboe IV (T) 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 (T) 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.

**MVKB 1013 Applied Preparatory Organ II (T)** 2 cr.  
Prerequisite: MVKA 1013. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

**MVKA 1313 Applied Principal Organ I (T)** 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.

**MVKB 1313 Applied Principal Organ II (T)** 2 cr.  
Prerequisite: MVKA 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.

**MVKA 2323 Applied Principal Organ III (T)** 2 cr.  
Prerequisite: MVKB 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.

**MVKB 2323 Applied Principal Organ IV (T)** 2 cr.  
Prerequisite: 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.

**MVKA 1213 Applied Secondary Organ I (T)** 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.

**MVKB 1213 Applied Secondary Organ II (T)** 1 cr.  
Prerequisite: 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.

**MVKA 2223 Applied Secondary Organ III (T)** 1 cr.  
Prerequisite: MVKB 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.

**MVKB 2223 Applied Secondary Organ IV (T)** 1 cr.  
Prerequisite: 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.

**MVKA 1413 Applied Major Organ I (T)** 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.

**MVKB 1413 Applied Major Organ II (T)** 3 cr.  
Prerequisite: MVKA 1413. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVKA 2423 Applied Major Organ III (T)** 3 cr.  
Prerequisite: MVKB 1413. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVKB 2423 Applied Major Organ IV (T)** 3 cr.  
Prerequisite: MVKA 2423. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

#### **MVO -- Music: Other Instruments Other**

**MVOA 1010 Applied Preparatory Other I (T)** 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.

**MVOB 1010 Applied Preparatory Other II (T)** 2 cr.  
Prerequisite: MVOA 1010. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

**MVOA 1310 Applied Principal Other I (T)** 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.

**MVOB 1310 Applied Principal Other II (T)** 2 cr.  
Prerequisite: 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.

**MVOA 2320 Applied Principal Other III (T)** 2 cr.  
Prerequisite: MVOB 1310. 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.

**MVOB 2320 Applied Principal Other IV (T)** 2 cr.  
Prerequisite: MVOA 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.

**MVOA 1210 Applied Secondary Other I (T)** 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.



**MVOB 1210 Applied Secondary Other II (T) 1 cr.**

Prerequisite: 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.

**MVOA 2220 Applied Secondary Other III (T) 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 (T) 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 (T) 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.

**MVOB 1410 Applied Major Other II (T) 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 (T) 3 cr.**

Prerequisite: MVOB 1410. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVOB 2420 Applied Major Other IV (T) 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****MVPA 1011 Applied Preparatory Percussion I (T) 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.

**MVPB 1011 Applied Preparatory Percussion II (T) 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.

**MVPA 1311 Applied Principal Percussion I (T) 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.

**MVPB 1311 Applied Principal Percussion II (T) 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.

**MVPA 2321 Applied Principal Percussion III (T) 2 cr.**

Prerequisite: MVPB 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.

**MVPB 2321 Applied Principal Percussion IV (T) 2 cr.**

Prerequisite: MVPA 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.

**MVPA 1211 Applied Secondary Percussion I (T) 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.

**MVPB 1211 Applied Secondary Percussion II (T) 1 cr.**

Prerequisite: MVPA 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.

**MVPA 2221 Applied Secondary Percussion III (T) 1 cr.**

Prerequisite: MVPB 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.

**MVPB 2221 Applied Secondary Percussion IV (T) 1 cr.**

Prerequisite: MVPA 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.

**MVPA 1411 Applied Major Percussion I (T) 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.

**MVPB 1411 Applied Major Percussion II (T) 3 cr.**

Prerequisite: MVPA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVPA 2421 Applied Major Percussion III (T)** 3 cr.  
Prerequisite: MVPB 1411. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVPB 2421 Applied Major Percussion IV (T)** 3 cr.  
Prerequisite: MVPA 2421. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVK -- Music: Keyboard (Continued)**  
**Piano**

**MVKA 1011 Applied Preparatory Piano I (T)** 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.

**MVKB 1011 Applied Preparatory Piano II (T)** 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 (T)** 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.

**MVKB 1311 Applied Principal Piano II (T)** 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 (T)** 2 cr.  
Prerequisite: MVKB 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.

**MVKB 2321 Applied Principal Piano IV (T)** 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 (T)** 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.

**MVKB 1211 Applied Secondary Piano II (T)** 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 (T)** 1 cr.  
Prerequisite: MVKB 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.

**MVKB 2221 Applied Secondary Piano IV (T)** 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 (T)** 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.

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

**MVKB 2421 Applied Major Piano IV (T)** 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)**  
**Saxophone**

**MVWA 1015 Applied Preparatory Saxophone I (T)** 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 (T)** 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 (T)** 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 (T)** 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 (T) 2 cr.**

Prerequisite: MVWB 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 3 cr.**

Prerequisite: MVWB 1415. Third semester of private

lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVWB 2425 Applied Major  
Saxophone IV (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T) 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 (T)** 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 (T)** 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 (T)** 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 (T)** 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 (T)** 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 (T)** 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 (T)** 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 (T)** 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 (T)** 2 cr.  
Prerequisite: MVBA 1013. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

**MVBA 1313 Applied Principal Trombone I (T)** 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 (T)** 2 cr.  
Prerequisite: MVBA 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 (T)** 2 cr.  
Prerequisite: MVBB 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.

**MVBB 2323 Applied Principal Trombone IV (T)** 2 cr.  
Prerequisite: MVBA 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 (T)** 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 (T)** 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 (T)** 1 cr.  
Prerequisite: MVBB 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.

**MVBB 2223 Applied Secondary Trombone IV (T)** 1 cr.  
Prerequisite: MVBA 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 (T)** 3 cr.  
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons de-



signed for the student majoring in performance. Two half-hour lessons a week.

**MVBB 1413 Applied Major Trombone II (T) 3 cr.**  
Prerequisite: MBVA 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 (T) 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 (T) 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 (T) 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 1011 Applied Preparatory Trumpet II (T) 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 (T) 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 1311 Applied Principal Trumpet II (T) 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 (T) 2 cr.**  
Prerequisite: MVBB 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.

**MVBB 2321 Applied Principal Trumpet IV (T) 2 cr.**  
Prerequisite: MVBA 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 (T) 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 1211 Applied Secondary Trumpet II (T) 1 cr.**  
Prerequisite: MVBA 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 (T) 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 (T) 1 cr.**  
Prerequisite: MVBA 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.

**MVBA 1411 Applied Major Trumpet I (T) 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 (T) 3 cr.**  
Prerequisite: MVBA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVBA 2421 Applied Major Trumpet III (T) 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 (T) 3 cr.**  
Prerequisite: MVBA 2421. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

### **MVB -- Music: Brasses (continued) Tuba**

---

**MVBA 1015 Applied Preparatory Tuba I (T) 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.

**MVBB 1015 Applied Preparatory Tuba II (T) 2 cr.**  
Prerequisite: MVBA 1015. Second semester of private lessons designed for music majors whose background indicates a need for further preparation. One hour lesson per week.

**MVBA 1315 Applied Principal Tuba I (T) 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 1315 Applied Principal Tuba II (T) 2 cr.**

Prerequisite: MVBA 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.

**MVBA 2325 Applied Principal Tuba III (T) 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 (T) 2 cr.**

Prerequisite: MVBA 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.

**MVBA 1215 Applied Secondary Tuba I (T) 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 1215 Applied Secondary Tuba II (T) 1 cr.**

Prerequisite: MVBA 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.

**MVBA 2225 Applied Secondary Tuba III (T) 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 (T) 1 cr.**

Prerequisite: MVBA 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.

**MVBA 1415 Applied Major Tuba I (T) 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 1415 Applied Major Tuba II (T) 3 cr.**

Prerequisite: MVBA 1415. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVBA 2425 Applied Major Tuba III (T) 3 cr.**

Prerequisite: MVBB 1415. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVBB 2425 Applied Major Tuba IV (T) 3 cr.**

Prerequisite: MVBA 2425. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVS – Music: Strings (Continued)  
Viola**

**MVSA 1012 Applied Preparatory Viola I (T) 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.

**MVSB 1012 Applied Preparatory Viola II (T) 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 (T) 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 1312 Applied Principal Viola II (T) 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 (T) 2 cr.**

Prerequisite: MVSB 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.

**MVSB 2322 Applied Principal Viola IV (T) 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 (T) 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 1212 Applied Secondary Viola II (T) 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 (T) 1 cr.**

Prerequisite: MVSB 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.

**MVSB 2222 Applied Secondary Viola IV (T) 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 (T) 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 1412 Applied Major Viola II (T) 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 (T) 3 cr.**

Prerequisite: MVSB 1412. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSB 2422 Applied Major Viola IV (T) 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)  
Violin**

---

**MVSA 1011 Applied Preparatory Violin I (T) 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.

**MVSB 1011 Applied Preparatory Violin II (T) 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 (T) 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 1311 Applied Principal Violin II (T) 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 (T) 2 cr.**

Prerequisite: MVSB 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.

**MVSB 2321 Applied Principal Violin IV (T) 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 (T) 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 1211 Applied Secondary Violin II (T) 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 (T) 1 cr.**

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 (T) 1 cr.**

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 a week.

**MVSA 1411 Applied Major Violin I (T) 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 1411 Applied Major Violin II (T) 3 cr.**

Prerequisite: MVSA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSA 2421 Applied Major Violin III (T) 3 cr.**

Prerequisite: MVSB 1411. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVSB 2421 Applied Major Violin IV (T) 3 cr.**

Prerequisite: MVSA 2421. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVV -- Music: Voice (Continued)  
Voice**

---

**MVVA 1011 Applied Preparatory Voice I (T) 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.

**MVVB 1011 Applied Preparatory Voice II (T) 2 cr.**  
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 1311 Applied Principal Voice I (T) 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.

**MVVB 1311 Applied Principal Voice II (T) 2 cr.**  
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 a week.

**MVVA 2321 Applied Principal Voice III (T) 2 cr.**  
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 a week.

**MVVB 2321 Applied Principal Voice IV (T) 2 cr.**  
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 a week.

**MVVA 1211 Applied Secondary Voice I (T) 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 a week.

**MVVB 1211 Applied Secondary Voice II (T) 1 cr.**  
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 a week.

**MVVA 2221 Applied Secondary Voice III (T) 1 cr.**  
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 a week.

**MVVB 2221 Applied Secondary Voice IV (T) 1 cr.**  
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 a week.

**MVVA 1411 Applied Major Voice I (T) 3 cr.**  
Prerequisite: placement by audition before the entire full-time music faculty. First semester of private lessons de-

signed for the student majoring in performance. Two half-hour lessons a week.

**MVVB 1411 Applied Major Voice II (T) 3 cr.**  
Prerequisite: MVVA 1411. Second semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVVA 2421 Applied Major Voice III (T) 3 cr.**  
Prerequisite: MVVB 1411. Third semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

**MVVB 2421 Applied Major Voice IV (T) 3 cr.**  
Prerequisite: MVVA 2421. Fourth semester of private lessons designed for the student majoring in performance. Two half-hour lessons a week.

## **NUR -- Nursing Practice and Theory**

**NUR 1000C Transitional Nursing Process I 12 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). This course, designed for and limited to the Florida Licensed Practical Nurse, encompasses a review of fundamental concepts of health needs, asepsis, fluids/electrolytes, and drug administration. The course includes basic principles of mental health, communication, family and pediatric nursing, with emphasis placed on resocialization of the nurse's role within the framework of the nursing process. This course utilizes simulated and actual nursing care work experiences for application of theoretical concepts. Students receive evaluation in selected clinical skills in the campus nursing laboratory. Nineteen contact hours: five lecture hours; fourteen laboratory hours.

**NUR 1021C Nursing Process I -- Fundamentals of Nursing 10 cr.**

Prerequisite: APB 2191C. Nursing I is a study of the principles and techniques that form the foundation for nursing care. The nursing process--assessing, planning, implementing and evaluating--serves as the framework for the application of content with emphasis on nursing intervention and adaptations for specific age groups, particularly the elderly client, 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. The course introduces current trends and legal implications of nursing. Fifteen contact hours: five lecture hours; ten laboratory hours.

**NUR 1212C Nursing Process II -- Medical Surgical Nursing 10 cr.**

Prerequisite: NUR 1021C, MCB 2013C. With Nursing I as a foundation, this course moves from the basic client needs in health maintenance to common health problems which require new knowledge and adaption and includes



study of the physical and psychological needs of clients. The course places emphasis on the essential knowledge, understanding, and skills necessary to the nursing care of adult clients with medical and surgical conditions and upon the interpersonal process. This course continues the four steps of the nursing process with a higher level of performance expected of students. Sixteen contact hours: four lecture hours; twelve laboratory hours. (Students will receive learning experiences on campus or in a clinical facility.)

#### **NUR 1703C Transitional Nursing II 6 cr.**

Prerequisite: NUR 1000C; Corequisites: May be enrolled in two of the following: 1. Any course listed under AS Degree Humanities; 2. Sociology 2000; or 3. A social science course; EUH 1000, AMH 2010, POS 2041, ISS 1120. A continuation of NUR 1000C, this course, designed for and limited to the Florida Licensed Practical Nurse, introduces the student to the use of the nursing process in his/her newly developing role when interacting with clients having interruptions in their physical and psychological health. The course emphasizes demonstration of knowledge, comprehension, application, and analysis of the nursing process and includes drug and diet therapy. The course utilizes simulated and actual nursing experiences to theoretical concepts and evaluates clinical skills in the campus nursing laboratory. Eight contact hours: four lecture hours; four laboratory hours (in campus lab or clinical facility).

#### **NUR 2313C Nursing Process IIIB – Nursing Care of Children 6 cr.**

Prerequisite: NUR 1212C, DEP 2004; Corequisites: NUR 2420C. With Nursing I and II as a basis, Nursing IIIB encompasses the study of physical and psychological problems of children from infancy through adolescence. This course uses the family-centered approach for learning the skills needed to care for sick children. Pediatric nursing supports 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. Through the utilization of the nursing process and the interpersonal process, this course also assists the student to apply knowledge of pediatric nursing in the solving of common recurring health problems associated with the child. Nineteen contact hours: five lecture hours; fourteen laboratory hours.

#### **NUR 2420C Nursing Process IIIA – Nursing Care of The Child Bearing Family 6 cr.**

Prerequisites: NUR 1212C, DEP 2004; Corequisites: NUR 2313C. With Nursing Process I and II as a basis, Nursing IIIA encompasses the child bearing cycle as an adaptation of the state of wellness and continues through the neonatal stage of development. Nursing of the child bearing family focuses on nursing intervention with families who are experiencing the stresses of the child bearing period. The nursing care of the child bearing family given by the student nurse relies 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. This course emphasizes utilizing nursing and the

interpersonal process to identify and meet the physiological and psychological needs of the child bearing family. This course also covers the uncomplicated and the complicated pregnancy, the focus being on the common recurring problems of this period. Laboratory experiences occur in community hospitals and other health agencies. Nineteen contact hours: five lecture hours; fourteen laboratory hours.

#### **NUR 2521C Nursing Process IVB -- Psychiatric Nursing 3 cr.**

Prerequisites: NUR 2420C, NUR 2313C; Corequisite: NUR 2731C. This four week course builds on the mental health concepts presented in each of the previous nursing courses. In varied clinical settings, this course emphasizes the 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 laboratory hours.

#### **NUR 2731C Nursing Process IVA -- Medical-Surgical Nursing Care of the Adult Patient 9 cr.**

Prerequisites: NUR 2420C, NUR 2313C, MCB 2013C; Corequisite: NUR 2521C. This eleven week 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 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 associate degree nurse practitioner, this course includes a transitional clinical experience. Twenty contact hours: four lecture hours; sixteen laboratory hours. (Students will receive learning experiences on campus or in a clinical facility.)

### **OCB – Oceanography: Biological**

---

#### **OCB 2003C Fundamentals of Marine Biology (T) 4 cr.**

The student will benefit by taking BSC 2011C and/or high school chemistry, physics, or CHM 1025C prior to enrolling in this course. This course consists of 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.

### **OCE -- Oceanography: General**

---

#### **OCE 2001 Survey of Oceanography (T) 3 cr.**

Prerequisite: MAT 1033; Corequisite: MAC 1104 and OCE 2001L. The student will benefit by taking high school chemistry and/or physics prior to enrolling in this course. This course consists of an introductory, comprehensive treatment of physical, chemical, and geological aspects of our oceans. Three contact hours.

#### **OCE 2001L Oceanography Laboratory (T) 1 cr.**

Corequisite: OCE 2001. This is a laboratory course intended to supplement OCE 2001, Survey of Oceanography, and includes field trips for application of oceanography.

graphic techniques. Three contact hours; three laboratory hours.

## **ORH -- Ornamental Horticulture**

### **ORH 1041C Basic Floral Design 3 cr.**

The purpose of this course is to introduce students to employment opportunities and educational and personal requirements for employment in the florist industry. Students will acquire basic skills in identification, care and processing of cut foliage and flowers; selection, use and care of laboratory tools; and basic techniques of design. Skill application includes round and triangular arrangements, centerpieces, simple funeral designs, and corsages. Four contact hours: one lecture hour; three laboratory hours.

### **ORH 1043C Intermediate Floral Design 3 cr.**

Prerequisite: ORH 1041C. The purpose of this course is to provide an introduction to casket spray construction, specialty funeral designs, silk and dried arrangements, and party work. The student will also study the art of European design, Oriental design, and parallel construction. Laboratory experiences provide the student with hands-on experience. Four contact hours: one lecture hour; three laboratory hours.

### **ORH 1045C Advanced Floral Design 3 cr.**

Prerequisites: ORH 1041C, ORH 1043C. This is the follow-up class to Intermediate Design. In this course the student will learn how to coordinate a complete wedding. It will include designing bouquets, corsages, decorating the church, and setting up the reception. Four contact hours: one lecture hour; three laboratory hours.

### **ORH 1520C Identification, Care, and Handling of Foliage and Flowering Plants 3 cr.**

This course is designed to introduce the student to the most common commercially produced flowering and foliage plants. The student will study basic plant morphology and physiology, plant identification, as well as the care of foliage and flowering plants in shops and homes. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the tools and materials appropriate to course content and in accordance with practices in the field. Four contact: one lecture hour; three laboratory hours.

### **ORH 1620 Basic Floral Management 3 cr.**

This course is designed to teach the student about buying, budgeting, keeping records, delivery, credit, billing, using a computer, managing employees, customer relations, planning for the holidays, advertising, and wire service reporting. Three contact hours.

### **ORH 1622 Advanced Floral Management 3 cr.**

Prerequisite: ORH 1620. This course is designed to provide the opportunity to students to acquire knowledge and skills necessary to open a retail flower shop. This instruction will include the selection of location, studying traffic patterns, demographics, and the availability of capital. The student will acquire knowledge as to how to layout the

workroom, cooler, sales area, and display window location. The student will display skills in selection of merchandise and products, and location of sources. Three contact hours.

### **ORH 1808 Exterior and Interior Landscaping 3 cr.**

This course provides the student with a basic overview of exterior and interior landscaping. Topics include site analysis, selection of plants, lighting requirements and maintenance. Differences between commercial and residential adaptations will be explored. Special emphasis will be given to the North Florida growing season. Three contact hours.

### **ORH 1941 Floral Design Internship I 3 cr.**

Prerequisite: ORH 1041C. Students will work in a retail florist shop nine hours per week. The instructor will work with the shop manager or owner to monitor student progress toward pre-determined goals. Students will attend a two hour seminar on campus every other week. Ten contact hours: one lecture hour; nine hours on-the-job experience.

### **ORH 1942 Floral Design Internship II 3 cr.**

Prerequisite: ORH 1941. This course is a continuation of ORH 1941. Students will work in a retail florist shop nine hours per week. The instructor will work with the shop manager or owner to monitor student progress toward pre-determined goals. Students will attend a two hour seminar on campus every other week. Ten contact hours: one lecture hour; nine hours on the job experience.

## **ORI -- Oral Interpretation**

### **ORI 2000 Oral Interpretation (T) 3 cr.**

Recommended prerequisite: SPC 2600. This course consists of critical analysis and appreciation of literature from both the emotional and the intellectual viewpoints. Designed to enhance the student's appreciation of words, ideas, and beauty in all forms of literature, this course involves the discussion and application of the techniques of oral reading of poetry, prose, and drama. Three contact hours.

## **OST -- Office Systems Technology**

### **OST 1100 Beginning Typewriting (T) 3 cr.**

The major objectives of the course, designed for the student who has little or no typewriting experience, are to learn the keyboard and to develop correct typewriting techniques. The course introduces horizontal and vertical centering, letters, simple forms, and reports. (Students who have satisfactorily completed one year of high school typewriting should enroll in OST 1110.) Three contact hours.

### **OST 1110 Intermediate Typewriting (T) 3 cr.**

Prerequisite: OST 1100 or one year of high school typewriting. This course, designed for students who have learned correct keyboarding techniques, emphasizes speed building and the application of basic skills to business letters, memoranda, reports, tables, and forms. (Students



who have satisfactorily completed two years of high school typewriting should enroll in OST 2120.) Three contact hours.

**OST 1211 Shorthand I (T) 3 cr.**

Corequisite: OST 1100. This is a beginning course which includes principles of Gregg Shorthand with some dictation and transcription practice. Students with no typewriting skill should take OST 1100 concurrently with OST 1211. (Students who have satisfactorily completed one year of high school shorthand should enroll in OST 1212.) Three contact hours.

**OST 1212 Shorthand II (T) 3 cr.**

Prerequisite: OST 1211 or ability to take dictation at 50 words per minute for two minutes. Corequisite: OST 1110 or ability to type 35 words per minute on straight copy. This course is a continuation of Shorthand I with increased practice in dictation and transcription. Three contact hours.

**OST 1324 Business Mathematics Using Calculators (T) 3 cr.**

Prerequisite: Satisfactory score on placement test. This course consists of a mathematical treatment of financial problems arising in modern businesses. The principal purpose of this course is to review the fundamental processes (addition, subtraction, multiplication, and division) while developing the numeric touch system and calculating skills in handling business transactions. The course covers percentages, simple and compound interest, inventories, depreciation, payroll, commissions, taxes, metrics, and other business related topics. Three contact hours.

**OST 1401 Office Systems I (T) 3 cr.**

Prerequisite: OST 1100 or ability to type 25 words per minute. This course is an introduction to office systems as the integration of people, procedures, equipment, and the environment. It provides a study of the information processing cycle utilizing both manual and electronic procedures and stresses the development of human relations skills for survival in today's office. Three contact hours.

**OST 1601 Machine Transcription I (T) 3 cr.**

Prerequisite: Eligible for ENC 1101; OST 1100 or ability to type 25 words per minute. This course integrates beginning transcription and keyboarding techniques with the development of reading, listening, and proofreading skills. This course includes the study of word usage skills, formatting, punctuation, capitalization, number usage, grammar, and sentence structure. Three contact hours.

**OST 1711 Word Processing I (T) 3 cr.**

Prerequisite: OST 1110 or ability to type 40 words per minute for five minutes on straight copy. This course includes concepts of word processing and applications on text-editing equipment. It covers the creation and revision of documents, stored text, and the use of special features. Three contact hours.

**OST 2120 Advanced Typewriting (T) 3 cr.**

Prerequisite: OST 1110 or ability to type 40 words per minute for five minutes on straight copy. This course em-

phasizes production typing of office correspondence, tables, reports, forms, and special documents. Simulated office materials are utilized, and mailable or usable copy is expected. Three contact hours.

**OST 2131 Advanced Typewriting -- Legal 3 cr.**

Prerequisite: OST 1110 or ability to type 40 words per minute for five minutes on straight copy. This is an advanced typewriting course which gives office systems students experience and practice in typing legal papers and documents. Three contact hours.

**OST 2135 Advanced Typewriting -- Medical 3 cr.**

Prerequisite: OST 1110 or ability to type 40 words per minute for five minutes on straight copy. This is an advanced typewriting course which gives office systems students experience and practice in medical terminology, and typing medical papers, documents, and forms. Three contact hours.

**OST 2213 Shorthand III (T) 3 cr.**

Prerequisites: OST 1212 or ability to take dictation at 60 words per minute for three minutes, OST 1110 or ability to type at least 45 words per minute. This course reviews Gregg Shorthand theory and develops the ability to take dictation and transcribe rapidly and accurately. Students who have studied other shorthand systems must have consent of professor before taking course. Three contact hours.

**OST 2335 Business Communications (T) 3 cr.**

Prerequisite: ENC 1101 or consent of professor, and the ability to typewrite. This course includes a study of effective business communications and a brief review of grammar, punctuation, and vocabulary with extensive practice given in business letter writing. Three contact hours.

**OST 2402 Office Systems II (T) 3 cr.**

Prerequisite: OST 1401. A continuation of Office Systems I with an in-depth review of the information processing cycle. Planning, organizing, decision making, and career development skills will be emphasized. Three contact hours.

**OST 2404 Office Systems Management (T) 3 cr.**

This course applies management principles to planning and controlling office systems. Emphasis is given to organization of office resources, leadership and motivation of office personnel, office environment, and design of business information systems. Three contact hours.

**OST 2602 Machine Transcription II (T) 3 cr.**

Prerequisite: OST 1601; OST 1110. This course is a continuation of OST 1601 and provides a simulation of office tasks to aid the student in attaining competency in transcribing from machine dictation, in proper and accurate use of language arts, in formatting office papers, and in the effective use of current office technology. Three contact hours.

**OST 2712 Word Processing II (T) 3 cr.**

Prerequisite: OST 1711. This course, covering word processing concepts and applications, is a continuation of

OST 1711. It emphasizes tables, special functions, and files. Three contact hours.

**PCB -- Process Biology  
(Cell/Molecular/Ecology/Genetics/Physiology)**

**PCB 2033 General Ecology (T) 3 cr.**

Prerequisite: Successful completion of a biological or physical science course. This course is an introduction to ecology, principles of ecology with applications to environmental issues, and discussion of major terrestrial/aquatic ecosystems. Three contact hours.

**PEL -- Physical Education Acts  
(General) -- Object Centered, Land**

**PEL 1041 Recreational Games (T) 1 cr.**

This course introduces 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 1121 Beginning Golf (T) 1 cr.**

This beginning course teaches the basic golf swing and its application to starter clubs. The course also includes golfing etiquette, history, rules, and simple strategy. Two contact hours (activity).

**PEL 1211 Softball (T) 1 cr.**

This course, designed for students who wish to broaden their knowledge of softball and improve their game skills, emphasizes the history of the game, rules, fundamentals, game skills and strategies. Two contact hours (activity).

**PEL 1321 Volleyball (T) 1 cr.**

This course teaches the fundamental skills, strategy and knowledge necessary for game and tournament participation. Two contact hours (activity).

**PEL 1341 Beginning Tennis (T) 1 cr.**

This introductory course covers 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 (T) 1 cr.**

The student will benefit by taking PEL 1341 prior to enrolling in PEL 1342. This course is 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 (T) 1 cr.**

This course covers the history, scoring, basic skills and game strategy of badminton. It also consists of appropriate class tournaments. Two contact hours (activity).

**PEL 1511 Soccer (T) 1 cr.**

This course introduces the student to the basic skills, techniques, rules, game play and knowledge of soccer. Two contact hours (activity).

**PEL 1622 Advanced Basketball (T) 1 cr.**

This course, designed to teach skills in basketball, includes instruction in offensive and defensive fundamentals, strategy, and rules as well as application in game situations. Two contact hours (activity).

**PEL 2322 Advanced Volleyball (T) 1 cr.**

This course introduces power volleyball techniques, tactics, and strategy to the student interested in either the competitive or recreational aspect of the game. Two contact hours (activity).

**PEM -- Physical Education Acts  
(General) -- Performance Centered, Land**

**PEM 1101 Physical Conditioning (T) 1 cr.**

This course, designed to assist men and women in becoming stronger, more flexible, better coordinated and more graceful, includes a program of planned activities such as selected exercises, use of the Universal Gym set, dumbbell and wand drills, rope jumping, and running. Two contact hours (activity).

**PEM 1109 Circuit Training (T) 1 cr.**

This course consists of a planned fitness training program to increase muscular strength and endurance through a planned series of exercises. Two contact hours (activity).

**PEM 1131 Strength Training  
(Nautilus/Universal) (T) 1 cr.**

Recommended prerequisite or corequisite: HLP 1081. This course is designed to provide basic strength training principles and individualized programs with emphasis on muscular strength and endurance. It is recommended and in some cases may be required that the student obtain medical approval prior to participation in the course. Two contact hours: one lecture hour; one laboratory hour (activity).

**PEM 1146 Beginning Jogging (T) 1 cr.**

Recommended prerequisite or corequisite: HLP 1081. This course introduces basic concerns of the beginning jogger such as safety factors, warm-up and cool-down, developing individual style, equipment selection, training principles, and injury prevention and precautions. It is recommended and in some cases may be required that the student obtain medical approval prior to participation in the course. Two contact hours: one lecture hour; one laboratory hour (activity).

**PEM 1148 Walking For Fitness 1 cr.**

Recommended prerequisite or corequisite: HLP 1081. This course introduces an everyday activity that can be transformed into a regular lifelong exercise program to help develop and maintain fitness. It is recommended and in some cases may be required that the student obtain medical approval prior to participation in the course. Two contact hours: one lecture hour; one laboratory hour (activity).

**PEM 1171 Aerobics to Music (T) 1 cr.**

Recommended prerequisite or corequisite: HLP 1081. This course is designed to introduce techniques for improv-



ing aerobic capacity exercises with a combination of exercise and dance set to music. Emphasis is more on movement and exercise rather than skill. It is recommended and in some cases may be required that the student obtain medical approval prior to participation in the course. Two contact hours: one lecture hour; one laboratory hour (activity).

**PEM 1301 Track and Field Events (T) 1 cr.**

This course includes an introduction to the basic skills and knowledge involved in sprinting, distance running, relays, and hurdling. Two contact hours (activity).

**PEM 1351 Cycling for Safety and Fitness (T) 1 cr.**

Recommended prerequisite or corequisite: HLP 1081. This course introduces basic concerns of the cyclist such as equipment/clothing, basic operating skills, traffic cycling/laws/safety, fitness training principles, and cycling for commuting, touring, racing, and fitness. Student must furnish own bike. It is recommended and in some cases may be required that the student obtain medical approval prior to participation in the course. Two contact hours: one lecture hour; one laboratory hour (activity).

**PEN -- Physical Education Acts  
(General) -- Water, Snow, Ice**

**PEN 1136 Underwater Diving Skills (T) 3 cr.**

Prerequisite: Students must demonstrate underwater and surface swimming skills required for SCUBA training during first class meeting. Student will benefit by taking MAT 0024 prior to enrolling in PEN 1136, the scientific study of underwater judgement, 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. Students must participate in field trips for open water diving as an integral component of the course's learning experience. Six contact hours: three lecture hours; three laboratory hours.

**PEO -- Physical Education Acts  
(Professional) -- Object Centered, Land**

**PEO 2003 Sports Officiating (T) 3 cr.**

This course, designed to acquaint the student with the techniques of officiating team, individual, and dual sports, covers baseball, basketball, track and field, volleyball, tennis, and handball. Three contact hours.

**PET -- Physical Education Theory**

**PET 2000 Introduction to Physical Education (T) 3 cr.**

This course, designed for students interested in physical education as a profession, 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.

**PGY -- Photography**

**PGY 2101C Photography I  
See page 122 of college catalog**

**PGY 2102C Photography II  
See page 122 of college catalog**

**PGY 2104C Creative Photography  
See page 122 of college catalog**

**PHI -- Philosophy**

**PHI 1103 Practical Logic: A Course in Critical  
and Creative Thinking (T) 3 cr.**

This course is design to develop fundamental skills in critical and creative thinking. It stresses the practical application of logical concepts such as the ability to recognize, evaluate, and analyze the thinking of others by analyzing language, evaluating evidence, and detecting and avoiding inaccurate or fallacious thinking; and the ability to solve problems, make decisions, and construct arguments. The course, thus, promotes clear and creative thinking. Three contact hours.

**PHI 2100 Introduction to Philosophy (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course consists of an introduction to philosophical issues organized, for the most part, on a historical basis. The student encounters some of the perennial problems of philosophy and the types of answers that have been suggested by studying the thought of selected philosophers. This course includes reading and writing competencies. Three contact hours.

**PHI 2100 Introduction to Logic (T) 3 cr.**

This course provides a general introduction to logic that combines 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 Moral and Political Philosophy (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course is 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. This course includes reading and writing competencies. Three contact hours.

**PHY -- Physics**

**PHY 1020 Physics for Liberal Arts (T) 3 cr.**

Corequisite: MAT 1033 or equivalent. This course is a general education course for the non-science student. This

course is 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 (T) 5 cr.**

Prerequisite: MAC 2311; Corequisite: MAC 2312. This course, designed for students majoring in physics, chemistry, and engineering, includes mechanics, conservation principles, rotational and harmonic motions, heat, thermodynamics, and waves. Laboratory work will illustrate important principles and develop techniques. Seven contact hours: four lecture hours; three laboratory hours.

**PHY 2049C Physics II with Calculus (T) 5 cr.**

Prerequisite: PHY 2048C; Corequisite: MAC 2313. This course, a continuation of PHY 2048C, includes electricity, magnetism, light, and some areas of modern physics. Laboratory work is similar to and a continuation of the laboratory in PHY 2048C. Seven contact hours: four lecture hours; three laboratory hours.

**PHY 2053C General Physics I (T) 4 cr.**

Prerequisite: MAC 1104; Corequisite: MAC 1114. The course, designed for those students who are majoring in pre-med, physical therapy, pre-optometry, pre-dental, pre-veterinary, biological sciences, technology and geology, stresses problem solving abilities. Subject matter includes mechanics, heat, and thermodynamics. Six contact hours: three lecture hours; three laboratory hours.

**PHY 2054C General Physics II (T) 4 cr.**

Prerequisite: PHY 2053C. This course, a continuation of PHY 2053C, includes electricity, magnetism, light, waves (sound, light, and so forth), 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; three laboratory hours.

**PLA -- Para-Legal Assistant**

**PLA 1003 Introduction to Legal Assisting (T) 3 cr.**

This course provides an overview of the purpose and training of legal assistants. It examines the roles of the attorney and the legal assistant and the professional and ethical standards of practice applicable to both. The course briefly surveys the fields of law in which legal assistants work and the Florida and federal court systems. Three contact hours.

**PLA 1080 Legal Interviewing and Communicating 3 cr.**

This course is designed to sharpen oral communication skills. The student receives training in inter-personal communication and interview techniques. The student learns to plan interviews and use interview checklists, as well as to listen effectively. Role-playing and videotape are used to assist in the development of verbal skills. Three contact hours.

**PLA 1104 Legal Research and Writing I 3 cr.**

This course provides an understanding of various components of a law library and emphasizes research skills through the use of digests, encyclopedias, reporter systems, codes, Shepards, ALR, and other research tools. It also includes basic instruction and practice in legal writing and analysis. Three contact hours.

**PLA 2114 Legal Research and Writing II 3 cr.**

Prerequisite: Grade of "C" or better in ENC 1101 and PLA 1104. This course is a continuation of PLA 1104 and is intended to familiarize both practicing and potential legal assistants with the problems and procedures in legal research and writing. The student learns to prepare various legal documents, including case briefs, legal memoranda, and pleadings. Three contact hours.

**PLA 2203 Litigation (T) 3 cr.**

This course covers the process of civil and criminal litigation. It defines basic principles of pre-trial procedures and includes a survey of courts and their jurisdiction, investigation of facts, settlement of lawsuits, judgments and post-trial considerations. The emphasis is on drafting legal documents in each of these areas. Three contact hours.

**PLA 2273 Torts and Insurance Law (T) 3 cr.**

This course prepares the student to assist attorneys and corporations in tort and insurance law. The course covers the primary legal principles of tort and insurance law as well as the proper procedures for investigating such cases. The course includes intentional torts, negligence, strict liability, fire and casualty insurance, and workers' compensation claims. Three contact hours.

**PLA 2433 Business Organizations (T) 3 cr.**

This course provides a basic understanding of the formation and documentation required to form and operate sole proprietorships, partnerships, and corporations. Three contact hours.

**PLA 2603 Wills, Trusts, and Estates (T) 3 cr.**

This is a study of the legal aspects of the preparation of wills and trusts as well as the probating of estates. It also covers the procedures involved in accounting, administrations, gifts, life insurance, and estate planning. Three contact hours.

**PLA 2763 Law Office Procedures (T) 3 cr.**

This course covers the fundamentals of law office organization and procedure. It includes records management and accounting methods. Major attention is given to the development and use of a systems approach in the law office, in order to increase efficiency and reduce legal costs. Three contact hours.

**PLA 2803 Family Law (T) 3 cr.**

This course familiarizes the practitioners and the potential legal assistant with the laws and procedures relating to marriage, separation, dissolution of marriage, annulment, custody and support, adoption, name change, guardianship and paternity. Three contact hours.



## **POS -- Political Science**

---

### **POS 2041 American Federal Government (T) 3 cr.**

This course consists of a study of the theory, organization, principles, and functioning of the federal government, emphasizing the relationship of the individual to the government. The course includes reading and writing competencies. Three contact hours.

### **POS 2112 State and Local Government (T) 3 cr.**

This course, consisting of a study of state and local forms of government in the United States, explores the government of Florida as an example of activities and patterns of state government. In addition, the course examines the responsibilities of local government at county and city levels. Three contact hours.

## **PSC -- Physical Science**

---

### **PSC 1341 Physical Science (T) 3 cr.**

The student will benefit by taking high school algebra or MAT 0024 prior to enrolling in PSC 1341. This course acquaints 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 essentially an introductory or preparatory course for any specific physical sciences. Three contact hours.

## **PSY -- Psychology**

---

### **PSY 1012 General Psychology (T) 3 cr.**

This course consists of an analysis of human behavior through the study of the adaptation of the individual to the physical and social environment. Three contact hours.

## **REA -- Reading**

---

### **REA 0010 Introduction to Reading Techniques (College Preparatory Course)**

This reading course, designed to develop each student's reading skills, emphasizes the basic reading skills. This course uses a diagnostic/prescriptive approach to strengthen individual skills in vocabulary and comprehension. Individualized work provides self-paced practice in specific skills. This course does not apply toward the Associate Degree. Four credit hours, five contact hours.

### **REA 1105 College Reading Techniques (T) 3 cr.**

Prerequisite: REA 0010 or satisfactory score on placement test. This course is a college level reading course that emphasizes textbook reading techniques, learning strategies, vocabulary, and comprehension skills needed for success in college. Three contact hours.

### **REA 2205 Reading for Speed and Comprehension (T) 3 cr.**

Prerequisite: REA 1105, or a satisfactory score on placement test. This course is for college students, busi-

ness 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 1040 Real Estate Principles and Practices (T) 4 cr.**

This course provides students with the fundamentals of real estate and license law under Florida statutes. It includes a study of the business and legal aspects of real estate ownership, contracts, deeds, titles, mortgage instruments, property law, and Florida Real Estate Commission governing policies and regulations relative to salespersons. Successful completion of this course and the end-of-course examination meets the Florida Real Estate Commission requirements. Four contact hours.

### **REE 1100 Real Estate Appraisal (T) 3 cr.**

This is an intensive course that has been developed to impart a broad understanding of real property appraisal concepts, to teach technical skills employed in their applications to residential properties and to give the experienced real estate person a basic knowledge of appraisal fundamentals. Three contact hours.

### **REE 1400 Real Estate License Law 3 cr.**

This course covers a detailed explanation of Florida Real Estate Law as contained in the Florida Real Estate Handbook. This course discusses the operation, requirements and procedures of the real estate office. Three contact hours.

### **REE 2200 Real Estate Finance (T) 3 cr.**

Prerequisite: REE 1040 or Real Estate Salesperson's Registration Certificate. This course consists of concepts, principles, and practices pertaining to real property finance, including 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 3 cr.**

This course approaches the subject from the viewpoint of the mortgage loan officer who seeks to develop a sound mortgage portfolio. The course presents a picture of the mortgage market 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 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. The course incorporates a detailed study of mortgage lending practices into the course. Three contact hours.

**REE 2300 Real Estate Investment (T) 3 cr.**

The student will benefit by taking REE 1000 prior to enrolling in REE 2300. This course familiarizes 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, Economic Recovery Tax Act of 1981, apartment complexes, and warehouse properties. Three contact hours.

**REE 2430 Real Estate Law (T) 3 cr.**

This course offers suggestions as to types of real estate documents, their form and contents, 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 3 cr.**

Prerequisite: REE 1040 or Real Estate Salesperson's or Broker's Registration Certificate. This course presents a 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 this course is equivalent to the 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 (T) 3 cr.**

This course analyzes the religious environment in the United States since the Second World War with special emphasis on the period since the 1960's. Its purpose is to acquaint the student with modern American religious trends and the influence of religion on American life, stressing both the newness and the durability of the American religious situation. Three contact hours.

**REL 2210 Religious Thought in the Old Testament (T) 3 cr.**

This course is a study of religious thought and instruction in the Old Testament with attention given to the problems of authorship, date, historical setting, and textual criticism. Three contact hours.

**REL 2240 Religious Thought In the New Testament (T) 3 cr.**

This course studies the life and teachings of Jesus, and the beginning of church life and thought as reflected in the New Testament. Three contact hours.

**REL 2300 World Religions (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory score on placement test. This course consists of a survey of world religions with emphasis upon Hinduism, Buddhism, Judaism, Chris-

tianity, and Islam. This course includes reading and writing competencies. Three contact hours.

**RET -- Respiratory Therapy****RET 1024 Fundamentals of Respiratory Therapy 4 cr.**

This introductory course covers basic respiratory therapy equipment, medical gases, gas therapy, and the respiratory therapy department. Four contact hours.

**RET 1276 Clinical Skills For the Respiratory Therapist 4 cr.**

Corequisite: RET 1024. This course introduces the student to and trains the student in the nursing and rehabilitative skills necessary to provide quality respiratory care. Four contact hours.

**RET 1824 Orientation to the Hospital Environment 4 cr.**

Prerequisite: Permission of the professor. This course provides the student with an introduction to the hospital environment, the function of the Respiratory Therapy Department, and the role and responsibilities of the respiratory therapist. Eight contact hours (clinical).

**RET 2264 Ventilatory Management 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 6 cr.**

Prerequisite: APB 1260 or permission of professor. This course introduces the respiratory therapy student 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 course includes close supervision of the performance of these procedures. Twelve contact hours (clinical).

**RET 2273L Clinical Seminar In Intensive Respiratory Care I 1 cr.**

Prerequisite: APB 1260; Corequisite: RET 2832. 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 2284C Clinical Seminar In Intensive Respiratory Care II (T) 1 cr.**

Prerequisites: RET 2273L and RET 2264. Corequisite: RET 2833. 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 2414 Pulmonary Function Studies (T) 2 cr.**

Prerequisite: APB 1260. 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** 2 cr.

Prerequisite: APB 1260. This course introduces the student to arterial blood gas analysis and various techniques of monitoring the critically ill patient. The course also includes the interpretation and clinical significance of the data gained from these monitoring techniques. Two contact hours.

**RET 2714 Neonatal and Pediatric Respiratory Care (T)** 3 cr.

Prerequisite: APB 1260 or permission of the professor. This course investigates fetal, neonatal, and pediatric differences 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.

**RET 2832 Respiratory Intensive Care Practicum I** 12 cr.

Prerequisite: RET 2264. This course provides 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 2833 Respiratory Intensive Care Practicum II** 12 cr.

Prerequisite: RET 2832. In continuation, this course provides the student with the essential clinic skills necessary to function as a competent respiratory therapist in the critical care areas. Twenty-four contact hours (clinical).

**RMI -- Risk Management and Insurance**

**RMI 1500 Principles of Life Insurance** 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 1521 Principles of Insurance (T)** 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. The course emphasizes the presentation principles and explanations of practices and presents methods of comparing the relative cost. (This course as taught on the 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 1541 Life Company Operations** 3 cr.

This course corresponds to Part II of the Life Office Management Association (LOMA) Insurance Education Pro-

gram. The course covers life insurance home office organization, regulation, taxation, and mathematical aspects as well as the marketing and investment functions. Three contact hours.

**RMI 1542 Legal Aspects of Life Insurance** 3 cr.

This course corresponds to Part III of the Life Office Management Association (LOMA) Insurance Education Program. The course is an up-to-date presentation of the law of life insurance contracts for the person whose principal interest is life insurance rather than the law. Three contact hours.

**RMI 1612 Principles of Casualty Insurance and Surety Bonding** 3 cr.

Prerequisite: RMI 1521. 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 1613 Principles of Fire and Allied Lines** 3 cr.

Prerequisite: RMI 1521. This course is an introduction to the four areas of fire insurance, ocean marine and inland marine insurance and multiple-line coverage. For each of these four areas, specimen contracts are examined. The course covers each area with regard to the perils, property, losses, persons, locations, time and hazards. Three contact hours.

**RMI 1615 Principles of Property Insurance Adjusting** 3 cr.

This course, an introduction to the general principles of insurance and property loss of adjusting, covers the following areas: risk and insurance, suretyship, risk management principles of law and the insurance transaction, the insurance contract-limitations on coverage and limitation on amount of loss, the procedure, investigation, and reports of adjustment of property losses, and estimations of business losses. Three contact hours.

**RMI 1631 Principles of Insurance and Liability Claim Adjusting** 3 cr.

This course which corresponds to Part II of the Insurance Institute of America course in Adjusting examines the principles and practices of adjusting liability claims. Three contact hours.

**RMI 1664 Marketing Principles of Life and Health Insurance** 3 cr.

This course presents 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 1666 Principles of Health Insurance** 3 cr.

This introduction to health insurance covers health losses

and protection, expense and income coverage, and health insurance, its growth, and many areas of coverage offered by government, commercial, and Blue Cross-Blue Shield organizations. Three contact hours.

### **RTV -- Radio - Television**

#### **RTV 2001C Introduction to Broadcasting (T) 3 cr.**

This course consists of 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 (T) 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 (T) 3 cr.**

Prerequisite: RTV 2200C. This course, a continuation of RTV 2200C, 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 1000 Conversational Russian (T) 3 cr.**

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

#### **RUS 1120 Beginning Russian I (T) 4 cr.**

This beginning course consists of the fundamentals of Russian speech and grammar taught by integrating the basic communication skills of hearing and understanding, speaking, reading, and writing. Five contact hours: four lecture hours; one unsupervised laboratory hour.

#### **RUS 1121 Beginning Russian II (T) 4 cr.**

Prerequisite: RUS 1120 or equivalent. This course is a continuation of RUS 1120. Five contact hours: four lecture hours; one unsupervised laboratory hour.

### **SLS -- Student Life Skills**

#### **SLS 1101 Dynamics of Student Success (T) 1 cr.**

This course is designed to assist students to adapt and cope with a college environment. Included in the course are an overview and discussion of the institution, personnel,

regulations, resources, academic motivation, and methods of study to be successful in an academic environment. Each suffix may be taken one time for a total of three credit hours. Particular topical emphases are shown by suffix letter to the SLS designation as follows: SLSA 1101, Resources; SLSB 1101, Academic Strategies; SLS C 1101, Motivation. One contact hour per course.

#### **SLS 1223 Stress in Today's Society (T) 3 cr.**

This course, designed to acquaint the student with the nature and scope of stress in today's society, examines the causes and methods of prevention from a lay perspective. The course also discusses general environmental and social stressors which affect all people to some degree. A laboratory experience will utilize various relaxation techniques which may aid the student in coping with everyday stress. Four contact hours: two lecture hours; two laboratory hours.

#### **SLS 1301 Career Planning (T) 1 cr.**

This course assumes that career choice is a continuous process involving the understanding of self and one's environment. Using self-assessment instruments as well as group discussions, the student will utilize decision making techniques to select a tentative career path which is compatible with the student's individual aptitudes, abilities, values, and attitudes. One contact hour.

### **SOP -- Social Psychology**

#### **SOP 1002 Human Relations (T) 3 cr.**

Drawing from several areas of behavioral science, this course, designed for students in business and technical fields, is also suitable for general education and personal enrichment, but not recommended for the student who plans to major in psychology. The course 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 (T) 3 cr.**

This course consists of the study of individual behavior and how it is influenced by culture. This course emphasizes personal adjustment and individual development as they relate to interaction with other people. Three contact hours.

### **SPA -- Speech Pathology and Audiology**

#### **SPA 1332 Introduction to Sign Language (T) 3 cr.**

This course introduces the student to basic syntax and vocabulary needed for manual communication. Upon conclusion of this course, the student will have acquired the ability to use the Manual Alphabet and approximately 1,200 signs. With emphasis on expressive skills, methodology will be basically laboratory in nature; students will devote most classroom time to practice and to reinforce correct hand configurations and positions. Three contact hours.

#### **SPA 1380 American Sign Language (T) 3 cr.**

Prerequisite SPA 1332 with grade of "C" or better. This course, a continuation of SPA 1332, will present American Sign Language (Ameslan), which is the idiomatic and "dia-



lectic" language used by the hearing impaired. The student will learn specialized sentence structure, grammar, and usage of this language. The course will include dialogues with hearing-impaired students and will emphasize practice for receptive skills. Three contact hours.

---

### SPC -- Speech Communication

---

#### SPC 2440 Small Group Communication (T) 3 cr.

This course emphasizes the development of discussion skills in four areas: (1) the formats of 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 Forensic Activity (T) 1 cr.

This course is comprised of directed participation in Forensic activities with emphasis of individual speech events. Tournament activities involve a major feature of Forensic. Three contact hours (studio/rehearsal).

#### SPC 2600 Fundamentals of Speech Communication (T) 3 cr.

Prerequisite: ENC 1101 or its equivalent. This essential course in speaking and listening skills instructs students 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. This course also includes message transmittal involving vocal variations, articulation and appropriate levels of language usage, and listening for both literal and critical comprehension. Three contact hours.

---

### SPN -- Spanish Language

---

#### SPN 1000 Conversational Spanish (T) 3 cr.

This course concentrates on the development of oral and conversational skills in the language. Communicative habits and cultural patterns that influence everyday conversation will be included. Visual and auditory aids will be used; the student is expected to work independently in the Language Lab and with audio tapes. This course is designed for everyday use of the language; it will not fulfill the General Education foreign language requirements of the State University System. Three contact hours. (unsupervised lab work)

#### SPN 1120 Beginning Spanish I (T) 4 cr.

This beginning course consists of the fundamentals of Spanish speech and grammar taught by integrating the basic communication skills of hearing and understanding, speaking, reading, and writing. Five contact hours: four lecture hours; one unsupervised laboratory hour.

#### SPN 1121 Beginning Spanish II (T) 4 cr.

Prerequisite: SPN 1120 or equivalent. This course is a continuation of SPN 1120. Five contact hours: four lecture hours; one unsupervised laboratory hour.

#### SPN 2200 Intermediate Spanish I (T) 3 cr.

Prerequisite: SPN 1121. This course integrates a thorough review of the principles of grammar with compositions and conversations planned to develop a basic active vocabulary and facility in communicating in written and spoken Spanish. The student will study readings in the history and culture of Spain and Hispanic America. Four contact hours: three lecture hours; one unsupervised laboratory hour.

#### SPN 2201 Intermediate Spanish II (T) 3 cr.

Prerequisite: SPN 2200. This course is a continuation of SPN 2200. Four contact hours: three lecture hours; one unsupervised laboratory hour.

---

### STA -- Statistics

---

#### STA 2014 Introduction to Statistics (T) 3 cr.

Prerequisite: MAC 1102 or MAC 1104, with a grade of "C" or better. This course is designed to introduce students to the fundamentals of descriptive and inferential statistics with a pronounced emphasis on inference. The major topics include frequency distributions, methods for analyzing sets of data, probability, probability distributions, estimation, confidence intervals, hypothesis testing, simple linear regression, and correlation. The probability and statistical skills measured by CLAST are among the skills taught in this course. Three contact hours.

---

### SUR -- Surveying and Related Areas

---

#### SUR 1101C Surveying I (T) 3 cr.

Prerequisites: MAC 1114, ETD 1100. The course is a study of the fundamentals of surveying with emphasis on distance measurement, levelling, angles, bearings, traverses, topographic data collection, and construction layout. The course includes related field work, computations, and drawing. Four contact hours: two lecture hours; two laboratory hours.

#### SUR 2140C Surveying II (T) 3 cr.

Prerequisite: SUR 1101C. The course is a continuation of Surveying I and includes a study of the theory and practice of surveying with emphasis on electronic distance measurement, topographic surveying, land surveying, surveying astronomy, and curves. The program of study includes lectures, computing laboratory, and field practice. Four contact hours: two lecture hours; two laboratory hours.

---

### SYG -- Sociology, General

---

#### SYG 2000 Introductory Sociology (T) 3 cr.

This course includes a survey of the scope, methods, and concepts of sociology, enhancing the student's awareness of social values, norms, groups, and other aspects of the social world. Three contact hours.

#### SYG 2010 Social Problems (T) 3 cr.

Prerequisite: SYG 2000. This course includes 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 (T) 3 cr.**

This course includes a sociological 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 (T) 3 cr.**

Prerequisite: ACG 2001 is recommended. This course, recommended for Accounting, Associate in Science degree students, is a study of the Federal Revenue Code regulations and cases which apply to the determination of income taxes for individuals. Topics to be considered will include the preparation of the U.S. Individual Income Tax Return Form 1040 and its supplemental forms. Three contact hours.

**THE -- Theatre****THE 2000 Theatre Appreciation (T) 3 cr.**

Prerequisite: ENC 1101 or satisfactory grade on placement test. This introductory course consists of 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 2100 Introduction to Theatre History (T) 3 cr.**

This course surveys theatre history and drama from the theatre's origin in ancient Greece to the present. Three contact hours.

**THE 2945 Drama Practicum (T) 1 cr.**

This course consists of the planning and execution of production functions; scene construction and painting, props, costuming, lighting and other full technical responsibilities. This course includes writing competencies. Three contact hours (studio/rehearsal).

**TPA -- Theatre Production and Administration****TPA 2202 Theatre: Stagecraft (T) 3 cr.**

This course is an introduction to skills and crafts of stage design: knowledge of materials, techniques, tools and supplies for the basic execution of the environment. Three contact hours: one lecture hour; two laboratory/lecture combination hours.

**TPP -- Theatre Arts****TPP 2110 Acting I (T) 3 cr.**

This introductory course provides instruction and training in the basic concepts of acting, including methods, vocabulary, discipline, and exploration of the creative process through exercises in observation, awareness, and performance. The acting activities are intended as classroom assignments and do not require participation in other courses. Three contact hours.

**TPP 2111 Acting II (T) 3 cr.**

Prerequisite: TPP 2110 or consent of the instructor based on exhibition of necessary level of vocal skills and physical awareness. This course is a continuation of TPP 2110, and provides opportunities for experimentation with scripted material: scene study, analysis, audition and performance techniques. The acting activities are intended as classroom assignments and additional involvement in other productions. Three contact hours.

**TRA -- Transportation****TRA 1010 Principles of Transportation (T) 3 cr.**

This course is an introduction to transportation. Material includes studies 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 3 cr.**

This course covers 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. Completion of this course partially covers requirements for certification by the College of Advanced Traffic. Three contact hours.

**TRA 1033 Carrier Liability and Claims 3 cr.**

This course covers analysis of carrier's liability for goods, rights, and liabilities of carriers, consignees, and consignors; claim procedures, claim and government regulation. Three contact hours.

**TRA 1052 Transportation and Traffic Management II 3 cr.**

This continuing course in transportation and traffic management includes the 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 diversion, various transit privileges; embargoes; warehousing and distribution; and materials handling. Completion of this course partially covers requirements for certification by the College of Advanced Traffic. Three contact hours.

**TRA 1121 Rate Clerk 3 cr.**

This basic course in tariffs and rate structures includes descriptions of rate territories, how various freight is classified by each mode of transportation, and how to apply applicable tariffs. This course instructs 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 3 cr.**

This introduction to the field of material handling includes an analysis of jobs and career opportunities, general description of qualifications for entry level positions, shipping and receiving procedures, warehouse problems and inventory control. This course presents the entire field of material handling from the producer-manufacturer to the ultimate user-consumer. Three contact hours.

**TRA 1905 Independent Study of Transportation (T) 3 cr.**

This course introduces the student to the ever broadening area of transportation literature and causes the student to report the student's findings after a careful study and research into an area of personal interest. The student must use acceptable thesis procedures. Three contact hours.

**TRA 2020 Economics of Transportation (T) 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 2053 Transportation and Traffic Management III 3 cr.**

This course is a continuation of Transportation and Traffic Management I and II and covers through routes and through rates, application of arbitrations and differentials, advanced milling in transit, import and export traffic, technical tariff and rate interpretation, advanced claim adjustments, and rate and classification committee procedures. Completion of this course partially covers requirements for certification by the College of Advanced Traffic. Three contact hours.

**TRA 2054 Transportation and Traffic Management IV 3 cr.**

This course is a continuation of Transportation and Traffic Management I, II and III and covers a general discussion of the construction and application of the Interstate Commerce Act and practice before the Interstate Commerce Commission. Completion of this course partially covers requirements for certification by the College of Advanced Traffic. Three contact hours.

**ZOO -- Zoology****ZOO 1010C General Zoology (T) 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.

**SPECIAL SERIES COURSES****Cooperative Education****COE 1000 Cooperative Education Seminar 1 cr.**

The seminar prepares 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 3 cr.**

The first work experience in Cooperative Education provides 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 3 cr.**

The second work experience in Cooperative Education provides the student with further meaningful experiences that will enhance the student's college education through career exploration and job training. Forty contact hours.

**COMPENSATORY COURSES****CLAST Review****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).

**IDS 0004 Academic Skills Review**

Intensive review is given in mathematics, reading, and writing for students who require assistance in meeting the entry level competencies for the Developmental Education Link Through Achievement (DELTA) 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.

**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).

## Continuing Education 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.

### Career Advancement Courses

#### 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.

#### ACT 0891 Air Conditioning and Refrigeration Theory I

This course is designed to teach job entry level skills. Topics covered include compressors, condensers, evaporators, receivers, metering devices, basic cycle controls, refrigerant characteristics, refrigerant oils, basic refrigeration cycle, and personal and industrial safety.

#### ACT 0892 Air Conditioning and Refrigeration Theory II

Prerequisite: ACT 0891. This course is a continuation of ACT 0891 and is designed to teach job entry level skills. Topics covered include basic refrigeration cycle, accessories, piping dehydration, charging, discharging, installation procedures, multiple systems, troubleshooting, business ethics, employee and employer responsibilities, personal and industrial safety, and compressors.

#### ACT 0896 Piping

Prerequisite: ACT 0892. This course is designed to teach job entry level skills. Topics covered include piping, valves, tubing, and safety.

#### ACT 0897 Basic Electricity and Schematics

This course is designed to teach job entry level skills. Topics covered include wiring diagram symbols, schematic wiring diagram circuits, schematic wiring diagram exercises, electric meter, alternating current fundamentals, single phase motor theory, single motor testing, motor protection, troubleshooting, and electrical safety.

#### ACT 0898 Applied Electricity and Schematics

Prerequisite: ACT 0897 or consent of instructor. This course is a continuation of Basic Electricity and Schematics and is designed to teach job entry level skills. Topics covered include heat pumps, gas and oil furnaces, electric furnaces, and straight cooling units.

#### ACT 0899 Applied Heating I

Prerequisite: ACT 0897 or consent of instructor. This course is designed to teach job entry level skills. Topics covered include gas furnaces, gas controls, properties of gas, gas piping, gas combustion, gas burners, ventilation and combustion air, and gas troubleshooting.

#### ACT 0901 Applied Heating II

Prerequisite: ACT 0899 or consent of instructor. This

course is a continuation of Applied Heating I and is designed to teach job entry level skills. Topics covered include oil efficiency, oil heating, electric heat and heat pumps.

#### ACT 0902 Heating Lab

Prerequisite: ACT 0901 or consent of instructor. This course is designed to teach job entry level skills. Topics covered include electric heat, heat pumps, oil efficiency, oil furnaces, maintenance and troubleshooting, gas piping, and gas furnaces.

#### ACT 0903 Air Conditioning and Refrigeration Lab I

Prerequisite: ACT 0892 or consent of instructor. This course is designed to teach job entry level skills. Topics covered include compressors, condensers, evaporators, receivers, metering devices, basic cycle controls, refrigerant characteristics, refrigerant oils, basic refrigeration cycle, and personal and industrial safety.

#### ACT 0904 Air Conditioning and Refrigeration Lab II

Prerequisite: ACT 0903 or consent of instructor. This course is a continuation of Air Conditioning and Refrigeration Lab I and is designed to teach job entry level skills. Topics covered include refrigeration cycle, accessories, piping, dehydration, charging, discharging, shop safety, installation procedures, multiple system, troubleshooting, compressors, and personal and industrial safety.

#### ACT 0905 Applied Electricity and Electrical Lab

Prerequisite: ACT 0898 or consent of instructor. This course is designed to teach job entry level skills. Topics covered include building electrical control panels, wiring electrical components, and safety.

#### AER 0004 Engines

This course is designed to teach job entry level skills for mechanics and includes instruction in engine tune, engine repair and diagnosis. Instruction includes a combination of lecture and shop experience.

#### AER 0102 Automotive Electrical Systems

This course is designed to teach job entry level skills in mechanics. Topics include instruction in engine electrical systems, starting systems, charging systems, accessory systems, basic emission controls, and an introduction to computer control systems. (Combination of classroom and shop experience)

#### AER 0109 Fuel and Emission Control Systems

Prerequisite: AER 0004 and AER 0102, or permission of instructor. This course is designed to teach job entry level skills in fuel systems and emission control systems, and also includes computer control and fuel injection. (Both lecture and shop experience)

#### AER 0120 Steering and Suspension

This course is designed to teach job entry level skills. Topics included are service and repair of steering and suspension systems, power steering, wheels and tires. (Lecture and shop experience)



### **AER 0121 Brake Systems**

This course is designed to teach job entry level skills in the theory, operation, and repair of brake systems. Includes both drum and disc brakes, and also includes an introduction to anti-lock brake systems. (Combination of lecture and shop experience)

### **AER 0130 Automotive Specialist**

This course is designed to teach job entry skills in the alignment, suspension, and brake systems of cars and light trucks, including front wheel drive vehicles. Key elements of the course include: front end alignment, disc and drum brakes, tires and computerized balancing, shock absorbers, McPherson struts, and minor servicing.

### **AER 0131 Clutch and Transmissions**

This course is designed to teach job entry level skills in the theory and repair of clutches, manual transmissions and differentials. Instruction includes: basic service and repair of automatic transmissions. Lecture and shop experience.

### **AER 0171 Air Conditioning and Heating**

This course is designed to teach job entry level skills in the theory, service and repair of automotive heating and air conditioning systems. Instruction includes both classroom lecture and shop experience.

### **AER 0201 Automotive Body Welding (Repair)**

Prerequisite: AER 0263. This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics included are: analysis of damaged metal, welding, operating pressure, lead wiping and filling and burning and cutting technique.

### **AER 0212 Automotive Panel Replacement**

This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics included are: basic tools and equipment, body panel repair, power jacking equipment and panel sectioning.

### **AER 0214 Automotive Frame Straightening and Gauging**

This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics included are: construction, measure, damage and appraisal and straightening methods of frames.

### **AER 0220 Automotive Body Repair Basic**

This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics include metal straightening, refinishing analysis of damaged metal, hand tools and disc sanding.

### **AER 0221 Automotive Painting Problems and Preparation**

This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics include: paint problems, and corrections and spray patterns.

### **AER 0222 Automotive Painting Basic**

This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics include:

use of air compressors and transformers, painting and sanding equipment, proper use of sand paper, paint identification and spray painting safety.

### **AER 0223 Automotive Painting Advanced**

This course is designed specifically for job entry training in automotive body repair and refinishing field. Topics included are: equipment and paint identification, surface preparation, and finish and spot repair.

### **AER 0240 Automotive Glass and Sheet Metal Basic**

This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics included are: windshields and windows, glass operating mechanisms, doors and latches and basic glass tools.

### **AER 0241 Automotive Glass Removable and Replacement**

Prerequisite: AET 0240. This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics included are: repairing water and air leaks, windshield removal and replacement, door glass removal and replacement, and tail gate glass removal and replacement.

### **AER 0245 Automotive Glass and Sheet Metal Advanced**

This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics included are: door operating mechanism, and removal and alignment of headers and front bumpers, hoods and fenders, trunk lids and tail gates.

### **AER 0263 Automotive Body Repair Advanced**

Prerequisite: AER 0220. This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics included are: dent repair, disc sanding operations and picking, use of plastic body filler and fiberglass bridging and repair.

### **AER 0272 Automotive Damage Appraising**

This course is designed to teach job entry level skills in automotive body repair and refinishing field. Topics included are: sublet and warranty items, estimation of materials and labor and damage appraisal.

### **AER 0600 Introduction to Motorcycle Mechanics**

This course is designed to teach job entry level skills in the repair of motorcycles. Topics include: fuel systems, air exhaust systems, tools, gages and instruments. Special emphasis will be placed on safety.

### **AER 0601 Motorcycle Engine Systems**

This course is designed to teach job entry level skills on the different types of motorcycle engines. Topics discussed include: The two-stroke, four stroke, motorcycle head, removal and installation; repairs, clutches; transmission, and drive assemblies. Special emphasis will be placed on safety.

### **AER 0602 Motorcycle Chassis**

This course is designed to teach job entry level skills on the various parts of the motorcycle chassis. Topics covered

include: frames, forks, shocks, wheels, chains and sprockets, and brakes. Special emphasis will be placed on safety.

#### **AER 0613 Electrical Cooling and Lubricating Systems**

This course is designed to teach job entry level skills on the electrical, cooling and lubricating systems of a motorcycle. Topics covered include: starters, batteries, regulators, timing, points, oilmix, air cooling and water pumps. Special emphasis will be placed on safety.

#### **AER 0701 Introduction to Diesel Engines**

This course is designed to teach job entry level skills in diesel engines. Topics include diesel and gasoline engine basic components, engine performance and cycle of operation, and an overview on combustion chambers. Special emphasis will be placed on safety procedures.

#### **AER 0777 Maintenance and Troubleshooting of Diesel Engines I**

This course is designed to teach job entry level skills on the performance of proper maintenance, tune-up and troubleshooting procedures on auxiliary marine diesel engines. Emphasis will be placed on fuel injection and lubricating systems, adjusting valves, removing and testing fuel injectors, solving engine problems, and test running an engine on basis diesel engines, Volvo, Onan, Yanmar, Westerbeke/Perkins, John Deere and Mitsubishi engines.

#### **AER 0778 Maintenance and Troubleshooting of Diesel Engines II**

Prerequisite: AER 0777 or consent of instructor. This course should be taken along with maintenance and Troubleshooting of Diesel Engines I. It is designed to provide practical experience and job entry level skills to perform an engine tune-up on a Detroit diesel 8V-71, Cummins 855 C.I.D. and Caterpillar 1100 series diesel of exhaust valve clearance, governor gaps, no-load speed idle speed, injection timing valves and buffer screws. Injection testing, timing and adjustments will also be covered.

#### **AER 0779 Maintenance and Troubleshooting of Diesel Engines III**

Prerequisite: AER 0778 or consent of instructor. A course designed to teach job entry level skills in the Maintenance and Troubleshooting of Volvo, Yanmar, Onan, and Westerbeke Marine diesel engines. Special emphasis will be stressed on manufacturer's safety procedures. This course is a combination of laboratory and classroom experience.

#### **AER 0780 Caterpillar Diesel Engine Overhaul and Repair I**

This course is designed to teach job entry level skills in the overhaul and repair of Caterpillar diesel engines and their components. Topics include: service manual utilization, engine disassembly and precision measuring instrument use. Special emphasis will be placed on safety and manufacturer's overhaul procedures.

#### **AER 0781 Caterpillar and Diesel Engine Overhaul and Repair II**

Prerequisite: AER 0780 or consent of instructor. This

course should be taken along with Caterpillar and Diesel Engine Overhaul and Repair I. It is designed to provide practical experience and job entry level skills in the repair and overhaul of Caterpillar diesel engines. Topics include: engine assembly and run-in procedures and engine systems theory. Special emphasis will be placed on safety and manufacturer's overhaul procedures.

#### **AER 0783 Cummins Diesel Engine Overhaul and Repair I**

This course is designed to teach job entry level skills in the overhaul and repair of Cummins diesel engines and their components. Topics include: service manual utilization, engine disassembly and use of precision measuring instruments. Special emphasis will be placed on safety and manufacturer's overhaul procedures.

#### **AER 0784 Cummins Diesel Engine Overhaul and Repair II**

Prerequisite: AER 0783 or consent of instructor. This course should be taken along with Cummins Diesel Engine Overhaul and Repair I. It is designed to provide practical experience and job entry level skills in the overhaul and repair of Cummins diesel engines. Topics include: engine systems theory, engine assembly and run-in procedures. Special emphasis will be placed on safety and manufacturer's overhaul procedures.

#### **AER 0785 Detroit Diesel Engine Overhaul and Repair I**

This course is designed to teach job entry level skills in the overhaul and repair of Detroit diesel engines and their components. Topics include: service manual utilization, engine disassembly and use of precision measuring instruments. Special emphasis will be placed on safety and manufacturer's overhaul procedures.

#### **AER 0786 Detroit Diesel Engine Overhaul and Repair II**

Prerequisite: AER 0785 or consent of instructor. This course should be taken along with Detroit Diesel Engine Overhaul and Repair I. It is designed to provide practical experience and job entry level skills in the overhaul and repair of Detroit diesel engines. Topics include: engine systems theory and engine assembly and run-in procedures. Special emphasis will be placed on safety and manufacturer's overhaul procedures.

#### **AER 0787 John Deere Diesel Engine Overhaul and Repair I**

This course is designed to teach job entry level skills in the overhaul and repair of John Deere diesel engines and their components. Topics include: service manual utilization, engine disassembly and use of precision measuring instruments. Special emphasis will be placed on safety and manufacturer's overhaul procedures.

#### **AER 0788 John Deere Diesel Engine Overhaul and Repair II**

Prerequisite: AER 0787 or consent of instructor. This course should be taken along with John Deere Diesel Engine Overhaul and Repair I. It is designed to provide practical experience and job entry level skills in the overhaul and repair of John Deere diesel engines. Topics include:



engine systems theory and engine assembly and run-in procedures. Special emphasis will be placed on safety and manufacturer's overhaul procedures.

#### **AER 0789 Drivability and Diagnosis**

Prerequisite: AER 0109, or permission of instructor. This course is designed to teach job entry level skills and will provide skills in the diagnosis and repair of drivability problems. Areas covered will be engine, transmission, vibrations and noises, AC problems, computer and electrical systems. Emphasis on the use of manufacturer's diagnostic charts and testing equipment. Lecture and shop experience.

#### **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.

#### **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 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.

#### **AMT 0130 Aircraft Tools and Devices**

This course instructs the student in the specialized handtools, measuring instruments, power tools and metal working machines utilized in the Aircraft Sheetmetal trade. It provides the basis for the shop work required in later courses. A strong emphasis is placed on the appropriate safety practices.

#### **AMT 0131 Aircraft Materials and Metallurgy**

This course instructs the student in various materials used in aircraft construction and their physical properties. Emphasis will also be placed on non-destructive testing techniques and corrosion control methods.

#### **AMT 0132 Airframe Structures**

This course instructs the student in aircraft fuselage construction, industry publications and their usage, and types of aircraft hardware. The student also learns to read and interpret basic blueprints and sketches.

#### **AMT 0133 Metal Fabrication and Damage Repair**

In this course the student develops the manipulative skills for the trade by constructing various projects. The student is expected to read and interpret appropriate documentation in the same manner as will be required in the job setting.

#### **AMT 0810 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.

#### **AMT 0820 Aircraft Powerplant 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.

#### **AMT 0840 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.

#### **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.

#### **APS 0225 DES Wastewater Treatment Plant Operator**

This course is designed as supplementary instruction to prepare students to take the Wastewater C operators examinations. The course based on 120 hours of instruction will cover collection systems, sedimentation, secondary processes, tertiary treatment, disinfection practices, affluent disposal, laboratory test procedures, management and communication skills.

#### **APS 0226 DES Water Treatment Plant Operator**

This course is designed as supplementary instruction to prepare students to take the Water C operators examinations. This course based on 120 hours of instruction will cover water distribution, chlorination, filtration, softening, maintenance, laboratory procedures, management and communication skills.

#### **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, carbure-

tors, ignition systems, chassis, bodies, and power operated equipment.

#### **BCN 0010 Building Maintenance**

This course provides training in all phases of repair and maintenance of building fixtures and furnishings, including building interior, tile, linoleum, plastic, terrazzo, wood floors, rugs, paint and wall coverings. It includes instruction and skill development in the use of hand and power tools for basic maintenance and repair to plumbing, electrical, wood, metal and masonry fixtures and furnishings. This course is designed primarily for off-campus supplementary instruction.

#### **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 micro-computer applications, architectures, and availability, including the process of evaluating, ordering, and assembling kits and basic machine language programming. 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 micro-computers 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 microsoft BASIC computer language. 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.

#### **BDP 0300 Computer Programmer Training for the Disabled**

This course is designed specifically to train disabled persons in the field of computer programming. Students will undergo an intensive nine-month training period plus a two-month internship in area businesses as programmers. During the training the following areas will be covered: Business Correspondence, DP Concepts and Terminology, Analysis and Design, Terminal Familiarity (CMS), Programming Languages, Basic JCL, and CICS. Other areas will include Group Project System Utilities and Data Communication Concept. Enrollment is limited to physically disabled individuals admitted through a selective admission process. All entering students must take the SRA Computer Programmer Aptitude Battery.

#### **BDP 0610 Word Processing Software for Microcomputers**

**Prerequisite:** It is suggested that the student possess touch-typing skills prior to registering for the course. This first course in a series of five is designed to introduce and supplement the background of the beginning student to two word processing software packages (APPLEWRITER IIe and DISPLAYWRITE II) that have become popular on both the Apple IIe and IBM-PC microcomputers. The course will provide the student with the opportunity to create a letter or document, use appropriate edit and functions commands, insert and delete text, print final copy with headings, footing, page numbers, and more.

#### **BDP 0820 Electronic Spreadsheet Software for Microcomputers**

**Prerequisite:** It is suggested that the student possess touch-typing skills prior to registering for the course. This second course in a series of five is designed to introduce and supplement the background of the beginning student to a number of electronic spreadsheet software packages (VISICALC-ADVANCED, SUPERCALC III) that have become popular on both the Apple IIe and IBM-PC microcomputers. The course will provide the student with the oppor-



tunity to build, edit, and manipulate a spreadsheet for financial analysis, project planning, budget projections, and "what-if" analysis.

#### **BDP 0830 Data Base Software for Microcomputers**

**Prerequisite:** It is suggested that the student possess touch-typing skills prior to registering for the course. This third course in a series of five is designed to introduce and supplement the student's background with a number of data base software packages (PFS-File/ Report, Lotus 1, 2, and 3) that have become popular on both the Apple IIe and IBM-PC microcomputers. The course will provide the student with the opportunity to create and use a data base file for entering information, retrieving information, modifying the file, producing reports, and information selection and extraction.

#### **BDP 0840 Business Graphics Software for Microcomputers**

**Prerequisite:** It is suggested that the student possess touch-typing skills prior to registering for the course. This fourth course in a series of five is designed to introduce and supplement the background of the beginning student with a number of business graphics software packages (PFS-GRAPH, Lotus 1, 2 and 3) that have become popular on both the Apple IIe and IBM-PC microcomputers. The course will provide the student with the opportunity to use business data to create business graphics for scatter plots, piecharts, bar graphs, and line graphs.

#### **BDP 0850 Intergrated Business Software for Microcomputers**

**Prerequisite:** It is suggested that the student possess touch-typing skills prior to registering for the course. This fifth course in a series of five is designed to introduce and supplement the background of the beginning student with a number of integrated business software packages (Lotus 1, 2 and 3, FRAMEWORK) that have become popular on the IBM-PC microcomputer. The course will provide the student with the opportunity to simulate office problems in the business environment by creating data base files, graphs, spreadsheets, and documents, in addition to exchanging information among these functions without having to reenter the data or change magnetic media.

#### **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 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.

#### **CDA 0010 Computer Aided Drafting and Design**

This course provides supplemental training to persons employed in the field of drafting. The student will acquire 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 will command the system to create a fast-plot of any current active drawing in the system.

#### **CEQ 0115 Operating Engineering**

This course is designed primarily for apprenticeship instruction. Its contents will include proper procedure in the maintenance and operation of selected power construction equipment ranging from air compressors to steam shovels.

#### **CHD 0102 Family Day Care Home Operator**

This course prepares students to become operators of family day care homes. The focus of the curriculum is entrepreneurial and includes business financial management; personal finance; licensing standards; abuse prevention; health, safety and nutrition; child development; guidance techniques; selfawareness; planning and preparing a family day care home environment; and work experience in a child care setting. This course also includes all modules for the HRS 3-hour Family Day Care Home Training and the HRS 20-hour Child Care Worker Training.

#### **CIS 0935 Auto CAD Seminars**

A series of seminars are offered for individuals employed in industry and the design professions dealing with AutoCAD operating systems and applications. Seminars will vary between seven contact hours and thirty-two contact hours and will provide intensive, hands-on training in computer aided drafting and design utilizing AutoCAD and AutoCAD compatible software.

#### **CJD 0201 Law Enforcement Recertification Training**

This course is designed to meet the recertification training requirements for certified law enforcement officers as established by the State Criminal Justice Standards and Training Commission. Areas of instruction and training include: firearms, emergency vehicle operations, human and community relations, first aid and CPR, selfdefense, supervision and management, riot control, and other areas as needed.

#### **CJD 0491 Corrections Recertification Training**

This course is designed to meet the recertification training requirements for certified correctional officers as established by the State Criminal Justice Standards and Training Commission. Areas of instruction and training include: human and community relations, first aid and CPR, supervision and management, firefighting, self-defense, riot control, emergency vehicle operations, and other areas as needed.

#### **CJT 0310 Basic Firearms Qualification Course**

This course is designed for in-service individuals who must be certified to carry firearms but have not completed a basic recruit (police, corrections or auxiliary) course. Firearms instruction will include proper handling of the primary service weapon on the range, in operational and

off-duty situations. Safety, loading, unloading, care, cleaning and mechanics will also be covered. The course is in compliance with State Criminal Justice Standards and Training Commission requirements.

#### **CJT 0312 Firearms Familiarization**

This course is designed to provide to in-service personnel basic firearms training to those organizations in need of training which does not fall under the Criminal Justice Standards and Training Commission requirements. Firearms instruction will include safety, handling, mechanics, loading, unloading, care, cleaning, and range procedures.

#### **CJT 0313 Firearms Requalification**

This course is designed for the quarterly requalification of in-service auxiliary individuals who have previously been certified through a basic firearms program. Firearms instruction will cover safety, handling, mechanics, loading, unloading, care, and cleaning procedures. The course is in compliance with State Criminal Justice Standards and Training Commission requirements.

#### **CJT 0421 Law Enforcement Basic Emergency Vehicle Operation**

This course is designed for in-service police officers, recruits, and other law enforcement personnel. It is an intensive program of study dealing with vehicular dynamics, the driver's mental state during emergency situations and the driver's ability to successfully perform measured skills tests. The student will also receive training in accident avoidance and crash procedures, crash site suitability and self-protection at the time of disablement. The student will be trained to perform routine safety checks on the vehicle and to recognize potential mechanical defects. The course also includes discussion of civil liability resulting from negligent operation of motor vehicles.

#### **CJT 0422 Law Enforcement Refresher Emergency Vehicle Operations**

This course is designed as a refresher for the basic 24-hour Tactical Police Driving Course, and will be used as annual recurrent in-service training for police and other law enforcement personnel. The student who is an in-service law enforcement officer will receive a review of the driving techniques previously taught, with emphasis on hand and feet movements, braking, skid control and accident avoidance. This program may also be tailored to provide more advanced training in these areas when special needs occur.

#### **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 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**

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 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 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 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 0520 Fashion Design and Flat Pattern Drafting**

This course is designed for students with prior experience in clothing construction who are interested in design-



ing 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 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.

#### **COH 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.

#### **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 0700 Introduction to Dental Assisting**

This course consists of orientation to the dental profession, terminology, specialties in dentistry and basic human anatomy with emphasis on dental anatomy, supporting structures and development, basic microbiology and sterilization with lecture demonstration and laboratory.

#### **DEA 0701 Office Management and Procedures**

This course consists of dental office procedures and management principles including clinical records, recall

systems, filing, written communications, appointment control, telephone techniques, supply and inventory, insurance, bookkeeping, computers, human relations, banking, billing, collections, ethics and jurisprudence.

#### **DEA 0702 Preclinical and Clinical Dental Assisting**

This course covers the preclinical and clinical theory and practices of dental assisting including basic procedures for dental set-ups, operative preparations, handling of equipment, instrument, supplies, sterilization procedures, oral pathology and certification in CPR.

#### **DEA 0703 Dental Specialties**

This course consists of preventative dentistry, operative dentistry, endodontics, oral surgery, pedodontics, periodontics, prosthodontics and orthodontic procedures, techniques, instrumentation, chairside assisting, two and four handed dentistry and therapeutic and restorative procedures.

#### **DEA 0704 Dental Materials and Expanded Duties**

This course consists of the properties and manipulation of dental materials and their use in chairside procedures and the expanded duties, authorized by the Board of Dentistry.

#### **DEA 0705 Radiology**

This course consists of the theory, use and hazards of radiation in dentistry, the bisecting and parallel techniques, development and darkroom techniques and safety procedures and processing and mounting of x-rays, identification of landmarks and pathologies.

#### **DEA 0706 Dental Externship**

Externship Program students will rotate through dental offices in the community, Veterans Administration Dental Clinic, University of Florida Dental Clinic, and Naval Air Station Dental Clinic. Evaluation of the dental assisting student by the supervising dentist and the FCCJ instructor.

#### **DES 0010 Basic Current Dental Concepts**

This course provides supplementary instruction for the dental health professional which may include the dentist, the assistant, and/or the hygienist. Topics may include a general survey of office management, dental procedures for the dental team, specific dental techniques, utilization of modern materials in dentistry, patient care, office administration, maintaining necessary records, financial aspects of dental practice, legal aspects of dental practice, specific dental therapeutic measures, and expanded duties for the dental auxiliary.

#### **DES 0020 Intermediate Current Dental Concepts**

This course provides supplementary instruction for the practicing dentist, assistant and/or hygienist. Topics include a detailed study of office management, dental procedures for the dental team, specific dental techniques, utilization of modern materials in dentistry, patient care, office administration, maintaining necessary records, financial aspects of dental practice, legal aspects of dental practice, specific dental therapeutic measures, and expanded duties for the dental auxiliary.

**DES 0030 Advanced Current Dental Concepts**

This course provides supplementary instruction for the practicing dental health professional which may include the dentist, the assistant, and/or the dental hygienist. Topics include an advanced study of office management, dental procedures for the dental team, specific dental techniques, utilization of modern materials in dentistry, patient care, office administration, maintaining necessary records, financial aspects of dental practice, legal aspects of dental practice, specific dental therapeutic measures, and expanded duties for the dental auxiliary.

**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.

**EER 0001 National Electrical Code Review**

This course is designed for persons employed in the electrical field and provides a review of the calculations included in the Codes Exam. Instruction includes temperature connection, voltage drop, transformer, conduit fill, motor circuits and service entrance calculations. Single and polyphase calculations are also covered.

**EER 0005 AC/DC Contractors and Magnetic Motor Starters**

This course is designed for persons employed in the electrical field and teaches the operating features, application, troubleshooting, and repair of magnetic motor controls.

**EER 0015 Electrical Theory**

This course is designed for persons working in the electrical field who have not had the opportunity to attend formal classroom instruction or for persons desiring to refresh their theory skills. Instruction includes the fundamental concepts of electricity.

**EER 0020 Industrial Applications of Solid State Devices**

This course is designed for persons employed in the electrical field and teaches the application of semiconductor devices used in today's industrial electrical equipment. These circuits will be explained in the classroom followed by actual experimentation with the devices in the lab.

**EER 0030 Solid State AC Motor Devices**

This course is designed for persons employed in the electrical field and covers the operation, adjustment, troubleshooting, and repair of common AC drive systems. These systems will be explained/used in both the classroom and laboratory.

**EER 0035 Test Equipment**

This course is designed for electricians in the field. Instruction includes the operation and use of analog meters, digital meters, oscilloscopes and other special measuring instruments.

**EER 0040 Semi-Conductor Theory for Electricians**

This course is designed for electricians in the field and teaches the theory and operation of semiconductor devices used in the electrical trade. These devices will be explained in the classroom and then the devices will be applied in actual circuits in laboratory experiments.

**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 EET 1015C, 1025C, 2121C, 2119C, CET 2112C, 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 295 (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 0390 EMP Marine/Industrial Electricity**

This course is designed to meet the needs of employers and underemployed employees in the marine/industrial electricity field.

**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 0395 Emergency Medical Technology Seminar**

This seminar is designed as supplementary instruction to upgrade the skills of the working emergency medical technician.

#### **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 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.

#### **ETD 0100 Drafting I-General Engineering Drawing**

This is the first course in an entry level job preparatory drafting sequence. The course consists of a study of the fundamental principles and practices involved in the preparation of engineering drawings. Emphasis is placed on the tools and techniques of drafting including lettering, dimensioning, and multiview representation.

#### **ETD 0320 Drafting V-Computer Aided Drafting**

This course is the fifth in the drafting sequence and covers the specific area of Computer Aided Drafting. The course introduces the student to the fundamentals of computer aided drafting and design and provides the student with entry-level training in the use of CAD in a variety of technical drafting areas.

#### **ETD 0530 Drafting II-Architectural Drafting**

The course is the second course in the drafting sequence and covers the specific area of Architectural Drafting. The course provides the student with instruction in plan preparation, detail drawing, and the preparation of elevations.

#### **ETD 0537 Drafting IV-Mechanical and Electrical Drafting**

This course is the fourth course in the drafting sequence and covers the specific area of Mechanical And Electrical Drafting. The emphasis in the course is on the preparation of assembly and detail drawings of mechanical parts and also on the preparation of electrical drawings.

#### **ETD 0540 Drafting III-Civil Drafting**

This course is the third course in the drafting sequence and covers the specific area of Civil Drafting. Emphasis in the course is on the preparation of site plans, topographic and boundary drawings, plan and profile drawings, and land development drawings.

#### **EXV 0311 Electrical Concepts and Safety**

This course is designed to teach job entry level skills in industrial electronics. Topics covered include licensing requirements, working conditions, wages and benefits, job specialization, course counseling and safety.

#### **EXV 0312 Electrical Hand and Power Tools**

This course is designed to teach job entry level skills in recognizing and operating electrical trade-related hand and power tools. Topics covered include knock-out punches, benders, tread-cutting dies, cutters, crimpers and power drives. Special emphasis will be placed on safety.

#### **EXV 0313 Special Purpose Electrical Outlets**

This course is designed to teach job entry level skills in wiring and installation requirements for special purpose electrical outlets. Topics covered include ranges, dryers, washers, garbage disposals, fans, heating and air conditioning.

#### **EXV 0314 Electrical Materials**

This course provides job-entry level training in recognizing the basic materials used in electrical installations.

#### **EXV 0315 Low Voltage Electrical Circuits**

This course provides job entry level training in material, wiring, and installation of low voltage signaling, alarm/warning, and lighting control circuits.

#### **EXV 0316 Conduit Installations**

This course provides job entry level training in installation requirements, bending methods, and calculations for electrical conduit installations.

#### **EXV 0317 Electrical Switching Circuits**

This course provides job-entry level training in wiring and installation requirements for typical electrical switching circuits and includes single pole, three-way and four-way circuits.

**EXV 0318 Outlet and Lighting Circuits**

This course provides job-entry level training in wiring and installation requirements for typical electrical outlet and lighting circuits. The topics covered include incandescent, fluorescent, and recessed lighting fixtures.

**EXV 0319 Basic Electrical Theory**

This course is designed to provide the basic concepts of electrical theory required for entry into the electrical trade.

**EXV 0320 Single Phase Distribution Systems**

This course provides job entry level training designed to familiarize the student with the installation requirements for single phase residential, and commercial electrical distribution systems.

**EXV 0321 Polyphase Transformers**

This course provides job entry level training in the operation, calculations, connections and installation requirements for polyphase transformers.

**EXV 0322 Single Phase Transformers**

This course provides job entry level training in the operation, calculations and installation requirements for single phase transformers.

**EXV 0323 Polyphase Distribution Systems**

This course provides job entry level training designed to familiarize the student with the installation requirements for polyphase commercial and industrial electrical distribution systems.

**EXV 0324 Electric Motors I**

This course provides job entry level training designed to teach the theory, operation, and characteristics of A.C. and D.C. motors.

**EXV 0325 Electric Motors II**

Prerequisite: EXV 0324 or consent of instructor. This course is a continuation of EXV 0324 and is designed to teach job entry level skills. Topics covered include: wiring, connections, repair, and troubleshooting of A.C. and D.C. motors.

**EXV 0326 Electrical Services**

This course provides job entry level training in the material and installation requirements for overhead and underground electrical services.

**EXV 0327 National Electrical Code I**

This course provides job entry level training designed to teach level requirements of chapters 1 through 4 of the National Electrical Code Handbook.

**EXV 0330 Motor Controls I**

This course provides job entry training designed to teach the student to read and to interpret motor control schematic wiring and ladder diagrams.

**EXV 0331 Motor Controls II**

Prerequisites: EXV 0330 or consent of instructor. This course is a continuation of EXV 0330 and includes instruc-

tion in job entry level skills to enable the student to learn to wire, connection and troubleshoot typical motor control circuits.

**EXV 0335 Blueprint Reading Electrical**

This course provides job entry level training to enable the student to learn to read and interpret construction blueprints in order to determine the requirements for electrical installations.

**EXV 0336 Electrical Theory I**

This course provides job entry level training designed to teach the principles of DC electrical theory. Topics covered include, but are not limited to voltage, current, resistance, power, series circuits, and parallel circuits.

**EXV 0337 Electrical Theory II**

Prerequisites: EXV 0336 or consent of instructor. This course is a continuation of EXV 0336 and provides job entry level skills designed to teach the principles of AC electrical theory. Topics covered include, but are not limited to capacitance, impedance, power factors, and vectors.

**EXV 0511 Mathematics for DC Electricity**

This course is designed to teach entry level mathematical skills necessary for successful study of DC electricity. Topics covered include: fractions, ratios/proportion, scientific and engineering notation, basic laws of exponents, unit notation systems -- MKS, CGS, SI, English -- linear, area and volume measures, signed numbers, basic algebraic operations linear equations and logarithms.

**EXV 0512 DC Electricity**

This course is designed to teach entry level job skills in basic DC electricity. Topics covered include: work, power, energy, basic atomic structure, electrical properties and units, sources of voltage, Ohm's law, electrical measurements, use of measuring instruments, typical series, parallel and combination circuits, Kirchoff's laws, Millman's and Thevenin's methods, maximum power transfer, magnetism and devices, inductors, DC L/R circuits, capacitors and DC R/C circuits.

**EXV 0513 Mathematics for AC Electricity**

This course is designed to teach entry level mathematical skills required for an understanding of the concepts in AC electricity. Topics covered include: angular measurement in degrees and radians, angular velocity, basics of right-triangle trigonometry, rectangular and polar vectors, combining vectors and applications of phasors in AC theory.

**EXV 0514 AC Electricity**

Prerequisite: EXV 0512. This course is designed to teach entry level job skills in basic AC electricity and typical AC circuits. Topics covered include: AC v. DC, generating AC, waveforms - sine and rectangular amplitude and baseline measures: phase relationships, reactance, AC resistive, reactive and resonant circuits, transformers and polyphase essentials. Laboratory experiences reinforce the course topics.



### **EXV 0515 Electronic Devices**

Prerequisite: EXV 0514 or consent of instructor. This course is designed to teach job entry level skills in major semiconductor devices used in electronics. Topics covered include: vacuum tube basics, solid-state diodes, bipolar and field-effect transistors, thyristor devices and the fundamentals of integrated circuits. Laboratory experience is used to reinforce the course topics.

### **EXV 0516 Electronic Circuits**

Prerequisite: EXV 0515 or consent of instructor. This course is designed to teach job entry level skills in typical circuits common to analog systems. Topics covered include: amplifiers, operational-amplifiers, power supplies, oscillators and AM/FM modulation techniques. Laboratory experience is used to reinforce the course topics.

### **EXV 0517 Mathematics for Digital Electronics**

Prerequisite: EXV 0515 or professor's consent. This course is designed to teach job entry mathematical skills required to understand digital logic concepts. Course topics include several typical number systems, alphanumeric interchange code systems and Boolean logic algebra.

### **EXV 0518 Digital Electronics**

Prerequisite: EXV 0516 or consent of instructor. Corequisite: EXV 0517. This course is designed to teach job entry level skills in digital techniques and circuits. Topics covered include: logic gates, combinational logic circuits, typical integrated circuit families, flip-flops and sequential circuits. Laboratory experience will reinforce the course topics.

### **EXV 0519 Test Instruments and Electronic Troubleshooting**

This course is designed to teach job entry level skills in the operation, calibration and repair of typical electronic measurement instruments. An efficient approach to the diagnosis of electronic system malfunctions will also be taught. Laboratory experience will reinforce the course topics.

### **EXV 0520 Microprocessors**

Prerequisite: EXV 0518 or consent of instructor. This course is designed to teach job entry level skills in microprocessors. Topics covered include: machine and assembly level programming and interfacing techniques using the 6800 MPU, and other popular processors. Laboratory experience will be used to reinforce course topics.

### **EXV 0521 Tools and Mechanical Systems for Technicians**

This course is designed to teach job entry level skills in tools and machines. Topics covered include: a study of the basic laws, principles and applications of mechanical devices, force, power, machines and gear trains, hand and power tools and safe tool use.

### **EXV 0522 Motors, Generators and Transformers**

Prerequisite: EXV 0514. This course is designed to teach job entry level skills in the variety of AC and DC motors, generators and transformers typical in industry.

Topics covered include: single phase and 3-phase transformers and AC motors, generation of DC and AC, and DC motors.

### **EXV 0523 Basic Industrial Control**

Prerequisite: EXV 0520 or consent of instructor. This course is designed to teach job entry level skills in measurement methods and control systems used by industry. Topics covered include: physical phenomena sensing transducers, relays and relay logic, timing and time delay methods and synchro/servo devices.

### **EXV 0524 Industrial Control Systems**

Prerequisite: EXV 0523 or consent of instructor. This course is designed to teach entry level skills in industrial electronics control. Topics covered include: digital motor control, manual magnetic controllers, relay logic, digital/analog and direct digital control and programmable controllers.

### **EXV 0525 Electronics Fabrication**

Prerequisite: EXV 0515. Corequisite: EXV 0516 or consent of instructor. This course is designed to teach job entry level skills in typical tools, materials and techniques of electronic hardware fabrication. Topics covered include: GPS and NASA soldering standards, printed-circuit boards and chassis assembly.

### **EXV 0559 Schematic Diagram Analysis and Interpretation**

Prerequisite: EXV 0516 or consent of instructor. This course is designed to teach job entry level skills in interpreting schematic and wiring diagram symbols. Topics covered include schematic diagram in the troubleshooting procedure and the tracing of DC and AC signals through a system.

### **EXV 0561 Fundamentals of Radio Operation**

This course is designed to teach job entry level skills in radio operating procedures and practice. Topics covered include Federal Communications Commission rules and regulations and basic electronic theory.

### **EXV 0562 Loran "C" Operation**

This course is designed to teach job entry level skills in the basic operation of the Loran "C" Navigation receiver. Topics covered include basic operation and troubleshooting tests.

### **EXV 0563 Advanced Troubleshooting Procedures for Marine Electronics**

Prerequisite: EXV 0519 or consent of instructor. This course is designed to teach job entry level skills in advanced troubleshooting with relation to marine navigation. Topics covered include radar and two-way communications systems, the use of analysts and various forms of signal generators.

### **EXV 0564 Two-Way Communications Systems**

This course is designed to teach job entry level skills. Topics covered the principles of two-way communications systems, instruction in repeater systems, remote base sys-

tems, broadcast systems and maritime radio communications.

#### **EXV 0565 Basic FCC General Radiotelephone License Preparation**

**Corequisite:** EXV 0566. This course is designed to teach job entry level skills in preparation for the Federal Communications Commission General Radiotelephone licence examination. Topics covered include FCC required mathematics formulas and application, basic amplifiers, power supplies and components.

#### **EXV 0566 Advanced FCC General Radiotelephone License Preparation**

**Prerequisite:** EXV 0565 or consent of instructor. This course is designed to teach job entry level skills and is a continuation of Basic FCC General Radiotelephone License Preparation. Topics covered include ship radar endorsement, audio broadcast systems, motors and generators, radar and microwave principles, and television.

#### **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 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 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 included are 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 in-



creasingly 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 on 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 0437 Proof Operations/Financial Institutions**

This course is designed as supplemental training to enable individuals to quickly function on the job as Proof Operators in financial institutions and retail establishments.

#### **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.

#### **FCR 0500 Customer Service/Financial Institutions**

This supplemental course is designed to train employees of financial institutions to quickly function efficiently on the job as customer service representatives. Also, customer service personnel can strengthen their knowledge of financial services and human relations and abilities to cross-sell.

#### **FCR 0510 New Accounts/Financial Institutions**

This supplemental course is designed to train employees of financial institutions to quickly function efficiently on the job in a new accounts department. Also, new accounts personnel can strengthen their abilities in customer relations, product knowledge and documents.

#### **FFP 0005 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 ex-

amination 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.

#### **FFP 0074 Fire/Rescue Basic Emergency Vehicle Operations (EVOC)**

This course is designed for in-service personnel engaged in the emergency operation of fire and rescue apparatus and for the recruits enrolled in basic training. The course will deal with the mental and physical state of the driver, both during the emergency run and during the return to the station. The student will perform various exercises on both the road course and various simulators. The student will also receive instruction in the mechanical aspects peculiar to the piece of apparatus being used and in accident avoidance procedures. This course is designed to meet the training requirements for emergency vehicle drivers as established by applicable state laws.

#### **FFP 0150 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 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.

#### **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.

#### **FMD 0390 EMP Industrial Supervisory Development**

This course will be designed to meet the needs of employers and underemployed persons in industry.

#### **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 the planning, preparing, and

servicing of 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 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.

#### **FOS 0201 Sanitation and Safety**

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 ill-

nesses and demonstrate preventive techniques by adhering to sanitation standards. Emphasis is placed on methods of accident and fire prevention.

#### **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 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 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 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 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 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 Apprenticeship 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.

#### **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 0500 Theory of Printing Processes**

This course is designed to teach job entry level skills. It is a lecture course designed to give an introduction to major processes of the printing industry. All methods of typesetting including photo typesetting, hand and other machine methods of typesetting, mechanical art preparation, printers math and proofreading are included in the course.

#### **GRA 0503 Theory of Lithographic Processes**

This course is designed to teach job entry level skills. It is a lecture course designed to give an introduction to three major processes of the lithographic industry. Process camera operation, negative stripping and platemaking, and offset press operation are included in the course.

#### **GRA 0537 Cold Type Typesetting and Pasteup**

This course is designed to teach job entry level skills. It provides for skill development in the technique of setting type by photographic typesetting equipment, and also the preparation of mechanical art forms. Emphasis is placed on the application of basic techniques toward greater job complexity, increased quality and increased productivity.

#### **GRA 0571 Camera Operation and Film Processing**

This course is designed to teach job level entry skills. It provides for skill development in the technique of operating the process camera for the reproduction of line and halftone copy negatives, contact printing, preparation of darkroom chemicals, and developing graphic arts films and papers.

#### **GRA 0601 Negative Stripping and Platemaking**

This course is designed to teach job level entry skills. It is a course designed to provide for skill development in the technique of stripping up offset negatives and positives for proper press position, separating for color, and to expose and develop offset press plates.

#### **GRA 0635 Offset Press Operation**

This course is designed to teach job level entry skills. It is a course designed to provide for skill development in the technique of setting up, operating, and maintaining duplicators and offset presses in the 10x15, 11x17, 15x18, and 14x20 inch ranges.

#### **HCP 0100 Nursing Assisting**

Prerequisites: Completion of 10th grade, 18 years of age, health clearance, and completion of basic course in cardiopulmonary resuscitation. This course is designed to prepare a non-professional worker with minimal skills and knowledge to perform carefully selected patient care activities, in a nursing home only, under direction of the registered professional nurse. Upon successful completion the graduate will receive certification from the Florida State Department of Education as a certified nurse assistant. Course content includes classroom activities, simulated laboratory experiences and "hands on" experience in a designated clinical agency.

#### **HCP 0311 Home Health Aide**

Prerequisites: Current Florida Nurse Assistant Certification or written recommendation from an employer certifying proficiency in basic Nurse Assistant skills, including vital signs. This course is designed for students who currently are, or have previously been, employed in a related field. Emphasis will be placed upon the care of the client in the home environment. Family differences and ethical safe practices will be stressed. Common incapacitating conditions will be discussed in addition to procedures for assisting the client and his family to cope with limitations and stress. Instruction is limited to those supportive services required to assist the client toward independent living in a safe environment. The role of the Home Health Aide as an assistant to, and under direction of, the Registered Nurse is emphasized.

#### **HCP 0400 Patient Care Assistant**

Prerequisites: Completion of 10th grade, 18 years of age, health clearance, and completion of basic course in cardiopulmonary resuscitation. Content includes knowledge and skills relating to various patient care activities and associated non-professional services necessary in caring for the personal needs and comfort of clients in non-complex situations. This care may be given in a general hospital, a nursing home, or the home of the client. Family differences and ethical, safe practices will be stressed and instruction is limited to those supportive services necessary to assist the client toward independent living in a safe environment. The role of the Patient Care Assistant as an assistant to, and under direction of, the registered nurse is emphasized. Successful completion provides certification as a Certified Nurse Assistant in accord with Chapter 82-

163 Florida Statutes and certification as a Home Health Care Aide according to Public Law 10D-68-014.

#### **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 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.

#### **HEF 0105 Advanced Interior Design**

This course is designed as supplementary 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, outsides 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.

#### **HEV 0111 Child Care Aide**

This course is designed to train students to become aides in child day care centers. The curriculum includes and expands upon the HRS 20-hour State Child Care

Worker Training Course, employability skills, professionalism, clerical duties, plus supervised center experiences.

#### **HEV 0115 State Child Care Worker Training Course**

The State Child Care Worker Training Course will provide instruction in the four following areas: state and local rules and regulations which govern child care; health safety, and nutrition; identifying child abuse and neglect; and child growth and development. The course is designed for those who are employed in child care centers.

#### **HEV 0116 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.

#### **HEV 0118 Family Day Care Training**

This course provides supplemental training to licensed family day care home providers. The areas covered include state and local rules and regulations, child growth and development and health, safety and nutrition.

#### **HEV 0153 Child Care Trainer**

This course provides supplemental training to individuals who meet the criteria to be instructors of the HRS Statewide Child Care working course.

#### **HEV 0154 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.

#### **HEV 0161 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.

#### **HEV 0930 Child Care Seminar**

This instruction is a series of seminars designed as supplemental instruction for persons currently and/or previously employed in child care. These are in response to industry and/or community demand to be held at such times and in such locations to meet the participants' needs. Specific areas of interest will include: health and safety; nutrition; child transportation and safety; behavior management; working with parents; design and use of child oriented space; program curriculum and activities for children; community, health and social service resources; child abuse; day care for multilingual children; working with handi-



capped children in day care; owner or operators training program; and CPR.

#### **HEV 0940 Child Care Aide Internship**

Students will be placed in appropriate Child Care Centers throughout the city. They will be supervised by a faculty member and have an opportunity to put into practice, with supervision, those instructional and child care techniques that they have learned about in class.

#### **HFT 0150 Travel Agent**

This supplemental course provides the student who is employed, or has previously been employed, in a related field with a better understanding of the many levels in the travel industry, a listing of major associations and outline of travel agency operations. The geography portion offers complete and accurate information in order to develop geographic skills, including complete profile sheets, exercises and map tests. The domestic section contains detailed information on airline travel, abbreviations and codes, diagrams on fare construction and the details of making airline reservations and ticketing, also procedures for pricing reservations, deposits and payment such as visas, passports, customs, and insurance. Computerization will acquaint the student with the types of computer and computer terminology used with actual hands-on training.

#### **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 braided 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 enter-

prise, 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.

#### **HSC 0920 AIDS Workshop**

This course is designed to provide information on the transmission, control, treatment, and prevention of the AIDS virus. This course meets the continuing education requirement for most health professionals.

#### **HUN 0013 Weight Management through Fitness and Nutrition**

This course is designed as supplemental instruction for students to acquire basic principles of nutrition, behavioral analysis, and exercise, and apply them to the development, and implementation of a weight management plan. It is recommended and in some cases may be required that the student obtain medical approval prior to participation in the course.

#### **IDS 0010 Basic Skills I**

Corequisite: The first of a non-college job entry training course offered at the Downtown Campus, or permission of instructor. This course is designed to provide the basic academic skills necessary for completion of the first course in the occupational programs offered at the Downtown Campus. Following pretesting and assessment, the student will be provided with individualized instructional plan to upgrade mathematics and reading skills.

#### **IDS 0011 Basic Skills II**

Prerequisite: IDS 0010 or permission of the instructor. Corequisite: Enrollment in a non-college job entry training course offered at the Downtown Campus, or permission of the instructor. This course is designed to provide the basic academic skills necessary for completion of the second course in the occupational programs offered at the Downtown Campus. Following pretesting and assessment, the student will be provided with an individualized instructional plan to upgrade mathematics and reading skills.

#### **IDS 0012 Basic Skills III**

Prerequisite: IDS 0011 or permission of the instructor. Corequisite: Enrollment in a non-college job entry training course offered at the Downtown Campus, or permission of the instructor. This course is designed to provide the basic academic skills necessary for completion of the third course in the occupational programs offered at the Downtown Campus. Following pretesting and assessment, the student will be provided with an individualized instructional plan to upgrade mathematics and reading skills.

#### **IDS 0013 Basic Reading Skills**

This course is designed to provide vocational preparatory instruction. The student will be provided with an indi-

vidualized program to upgrade their reading skills. The amount of hours spent by the student in a particular area will depend on the scores achieved on the Test of Adult Basic Education.

#### **IDS 0014 Basic Mathematical Skills**

This course is designed to provide vocational preparatory instruction. The student will be provided with an individualized program to upgrade mathematical skills in arithmetic reasoning and fundamentals. The amount of hours spent in a particular area will depend on the scores achieved on the Test of Adult Basic Education.

#### **IEA 0201 In Plant Training/Seminars**

This course is designed as supplemental instruction for persons already employed in such fields as building trades, metal trades, electronics, marine trades, and automotive trades. Courses will be offered in response to industry demands at such times and places as will permit maximum participation by interested groups.

#### **IEA 0541 Pre-Construction Skills**

This course is designed to teach job entry level skills to carpenters. Topics covered include the building of tools boxes, saw horses, saw vises, and work benches. The course also will teach the use of the framing square and a review of working drawings.

#### **IEA 0542 Wall and Floor Framing**

This course is designed to teach job entry level skills in carpentry. Topics covered include framing and bracing of wall and floor frames.

#### **IEA 0543 Roof Framing I**

This course is designed to teach job entry level skills in carpentry. Topics covered include basic styles of roofs and construction and framing of a gable room.

#### **IEA 0544 Roof Framing II**

Prerequisite: IEA 0543 or consent of instructor. This job entry level course is a continuation of Roof Framing I. Topics covered include layout and construction of a combination roof.

#### **IEA 0545 Site Preparation and Layout**

This course is designed to teach job entry level skills in carpentry. Topics covered include the many aspects of site preparation and layout of buildings and houses.

#### **IEA 0546 Exterior Finish**

This course is designed to teach job entry level skills in carpentry. Topics covered include the different types of exterior finishing materials and their application.

#### **IEA 0547 Construction Lumber**

This course is designed to teach job entry level skills in carpentry. Topics covered include the different kinds of construction lumber, its growth, and how wood finally becomes lumber.

#### **IEA 0548 Finish Hardware**

This course is designed to teach job entry level skills in

carpentry. Topics covered include finish hardware, its selection, method of installation, intended use and appearance.

#### **IEA 0549 Rough Hardware**

This course is designed to teach job entry level skills in carpentry. Topics covered include metal fastening devices used in constructing a building.

#### **IEA 0550 Wood Products and Wood Substitutes**

This course is designed to teach job entry level skills in carpentry. Topics covered include wood, wood products and wood substitutes as it has been transformed into better and more useful forms.

#### **IEA 0551 Understanding Leveling Instruments**

This course is designed to teach job entry level skills in carpentry. Topics covered include the importance of accurate work in laying out buildings with the use of different leveling instruments.

#### **IEA 0552 Foundation Formwork**

This course is designed to teach job entry level skills in carpentry. Topics covered include the importance of accurate work in laying out buildings with the use of different leveling instruments.

#### **IEA 0553 Building Adhesives**

This course is designed to teach job entry level skills in carpentry. Topics covered include new adhesives as they aid in producing better work and making the application of many kinds of materials easier and faster.

#### **IEA 0554 Power Tools**

This course is designed to teach entry level skills in carpentry. Topics covered include safe proper use of radial arm saws, table saws, circular saws, routers and sanders.

#### **IEA 0555 Interior Finish**

This course is designed to teach job entry level skills in carpentry. Topics covered include the fundamentals of wall covering, door hanging, windows, stairs and cabinets.

#### **IEA 0556 Hand Tools**

This course is designed to teach job entry level skills in carpentry. Topics covered include the proper use and safety of hammers, chisels, screwdrivers, and saws.

#### **IEA 0571 Plumbing Concepts and Safety**

This course is designed to teach job entry level skills on plumbing. Topics covered include: working conditions and options available to plumbers. Special emphasis will be placed on safety.

#### **IEA 0572 Fittings and Materials**

This course is designed to teach job entry level skills on plumbing. Topics covered include: various types and sizes of fittings, related material and piping, including copper, P.V.C., cast iron, poly-B, steel, and pyrex.

#### **IEA 0573 Isometric Piping Drawing, Basic**

This course is designed to teach job entry level skills in



plumbing. Topics covered include: single-line piping drawings on an isometric angle.

#### **IEA 0574 Advanced Mathematics for Plumbers**

This course is designed to provide entry level skills in advanced mathematics for plumbers. Topics covered include: practical problems of developed length, volume, area, triangulation, and percentages.

#### **IEA 0575 Valves and Faucets**

This course is designed to teach job entry level skills for plumbers in recognizing and repairing major types and brands of faucets and valves. Topics covered include: gate and globe valves, ballcocks, douglas valves, tub and shower valves, lavatory faucets, and service sink valves.

#### **IEA 0576 Fixtures and Appliances**

This course is designed to teach job entry level skills in plumbing. Topics covered include: installation and troubleshooting of various plumbing fixtures and appliances including kitchen sinks, water closets, bathtubs, showers, water coolers, hose bibbs, bidets, and urinals.

#### **IEA 0577 Plans and Blueprints, Residential**

This course is designed to teach job entry level skills in plumbing. Topics covered include: reading residential plans and blueprints for proper installation of plumbing fixtures and piping

#### **IEA 0578 Joint Fabrication**

This course is designed to teach job entry level skills in plumbing. Topics covered include: assembling and fabricating fittings and fixtures to sanitary and portable water systems.

#### **IEA 0579 Design and Layout of Sanitary Drainage Systems, Residential**

This course is designed to teach job entry level skills in plumbing. Topics covered include: the design and layout of sanitary drainage systems according to principles of proper installations of fitting usage.

#### **IEA 0580 Pump Application Well, Circulating**

This course is designed to teach job entry level skills in plumbing. Topics covered include: various types of shallow well and circulating pumps, disassembly and operating procedures, and troubleshooting systems and components.

#### **IEA 0581 Residential Venting Systems I**

This course is designed to teach job entry level skills in plumbing. Topics covered include: venting systems and adaptations, wet venting, common venting combination waste and vent, utility, and loop or circuit vent. Code-specified sizing based on 10-D-9 will be emphasized.

#### **IEA 0582 Residential Venting Systems II**

Prerequisite: IEA 0581 or consent of instructor. This course is designed to teach job entry level skills and is a continuation of Residential Venting Systems I. Actual application of course content will be emphasized as the student constructs drawings to illustrate each concept.

#### **IEA 0583 Solar Domestic Water Heating Systems, Part I**

This course is designed to teach job entry level skills in plumbing. Topics covered include: the principles and techniques of using solar energy to augment the water heating appliances used in present homes; including collector plates (panels), storage valves, and pumps.

#### **IEA 0584 Solar Domestic Water Heating Systems, Part II**

Prerequisite: IEA 0583 or consent of instructor. This course is designed to teach job entry level skills in plumbing and is a continuation of Solar Domestic Water Heating Systems/Part I. Topics covered include: actual component installation and troubleshooting.

#### **IEA 0585 Water Supply Systems**

This course is designed to teach job entry level skills in plumbing. Topics covered include: design and layout of potable water supply and distribution piping, routing and sizing of supply piping, and supports and hangers.

#### **IEA 0586 Design and Layout of Potable Water Systems, Residential**

This course is designed to teach job entry level skills in plumbing. Topics covered include the design and layout of potable water systems according to proper principles of material type, use and size. Also covered will be the locations of supply outlets and origin.

#### **IEA 0587 Introduction to Mathematics for Apprentices**

This course is designed to teach job entry level skills in plumbing. Topics covered include: measuring techniques including fitting and fixture allowances. Skills in calculating fractions, decimals and mixed numbers will be reviewed. Practical problems in running pitch and grade as well as volumetric calculations will also be covered.

#### **IEA 0588 Plumbing Hand and Power Tools**

This course is designed to teach job entry level skills in plumbing. Topics covered include: recognition and safety operation of plumbing-related hand and power tools. Included will be: steel-fabricating dies and machines, copper fabricating torches and cutters, pyrex cutting and installation tool, cast iron cutting and installations tool, and many more.

#### **IEA 0589 The Language of Plumbing (Terms and Definitions)**

This course is designed to teach job entry level skills in plumbing. Topics covered include: trade-related words and terms that will be encountered in the everyday workplace.

#### **IEA 0590 Repair - Drain Cleaning to Remodeling, Part I**

This course is designed to teach job entry level skills in plumbing. Topics covered include: the repair and replacement of work or broken fixtures and valves. Remodeling and re-pipe procedures will also be reviewed.

#### **IEA 0591 Repair - Drain Cleaning to Remodeling, Part II**

Prerequisite: IEA 0590 or consent of instructor. This course is designed to teach job entry skills and is a con-

tinuation of Repair Drain Cleaning to Remodeling, Part I. Practical problems and the solutions will be covered as well as a general cost estimating segment.

#### **IEA 0592 Advanced Isometric Piping Drawing, Part I**

This course is designed to teach job entry level skills in plumbing. Topics covered include: drawing and sizing multi-level and multistory building and large scale commercial systems according to standards set by 10-D-9.

#### **IEA 0593 Advanced Isometric Piping Drawing, Part II**

Prerequisite: IEA 0592 or consent of instructor. This course is designed to teach job entry level skills and is a continuation of Advanced Isometric Piping Drawings, Part I. Southern Standard Plumbing Code requirements will be used as a guideline for this segment of drawing. Like Part I, the more complicated and detailed drawings will be emphasized.

#### **IEA 0594 Plumbing Code SSBC, Part I**

This course is designed to teach job entry level skills in plumbing. Topics covered include: the rules and guidelines of the Southern Standard Building Code.

#### **IEA 0595 Plumbing Code, SSBC, Part II**

Prerequisite: IEA 0594. This course is designed to teach job entry level skills and is a continuation of plumbing code SSBC, Part I. Topics covered include: practical problems and their implications in the code.

#### **IEA 0596 Plumbing Code 10-D-9, Part I**

This course is designed to teach job entry level skills in plumbing. Topics covered include: the rules and guidelines of the plumbing code (10-D-9).

#### **IEA 0597 Plumbing Code 10-D-9, Part II**

Prerequisite: IEA 0596 or consent of instructor. This course is designed to teach job entry level skills and is a continuation of Plumbing Code 10-D-9, Part I. Topics covered include: practical problems and their implications in the code.

#### **IEA 0598 Advanced Sanitary and Water Supply Systems**

This course is designed to teach job entry level skills in plumbing. Topics covered include: drawing and sizing, multi-level, multi-story, and large scale commercial buildings according to specifications in 10-D-9.

#### **IEL 0315 Construction Electricity**

This course is designed primarily for apprenticeship instruction, and its content 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 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.

#### **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 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 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, profitsharing plans and tax sheltered annuities.

#### **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 insurance, 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 made 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 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.

**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 disorders, first aid, defensive tactics and firearms training. Note:

Course is restricted to individuals sponsored with intent of employment by area law enforcement agencies.

**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 autopsy 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, investigations, 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 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.

#### **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 0005 Medical Assisting I**

This course is an intensive course designed specifically for job entry training and planned to orient the individual to a multitude of basic skills for employment in a physician's office, ambulatory care centers, clinics or hospitals. Examples of skills needed are secretarial practices and procedures, introduction to computers, medical transcription, examining room technique, x-ray safety, and laboratory procedures. Applicants are encouraged to type 25 words per minute or be familiar with a computer keyboard.

#### **MEA 0006 Medical Assisting II**

This course is an intensive course and a continuation of some of the skills presented in Medical Assisting I. It is designed specifically for job entry training and planned to orientate the individual to a multitude of basic skills for employment in the physician's office, ambulatory care centers, clinic or hospitals. Examples of these skills are secretarial practices and procedures, introduction to computers, medical transcription, examining room technique, x-ray safety, and laboratory procedures. Applicants are encouraged to type 25 words per minute or be familiar with a computer keyboard.

#### **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 consciously 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 0803 Correlations in Clinical Laboratory Disciplines**

This seminar presents for clinical laboratory professionals the clinical aspects of disease, pertinent laboratory data and the use of criteria in interpreting laboratory problems. The primary intent of the course is to expose participants to advances in a multiplicity of laboratory functions and improve their subspecialty skills and expertise.

#### **MNA 0550 Warehouse Management**

This course is designed to provide supplementary instruction for persons previously or currently employed in the warehouse management field as shipping and receiving clerks, packers, transportation agents, freight handlers, forklift operators, order clerks, stackers and CRT operators. Topics covered will include: safety practices, forklift operation, quality inventory control, materials handling, human relations, math operations, communications skills, house-keeping and security, basic economic principles and administrative controls.

#### **MSH 0390 EMP Machine Shop**

This course is designed to meet the needs of employers and underemployed employees in the machine shop industries.

#### **MTE 0028 Marine Technology - Electricity Specialty I**

Prerequisite: MTE 0006 or permission of instructor. This course is designed for job entry level training in marine electricity fields and includes instruction in Basic DC Theory, AC Theory, small boat electrical systems and introduces AC and DC motors and generators used in the marine industry. This course is a combination of classroom and laboratory experience.

#### **MTE 0029 Marine Technology - Electricity Specialty II**

Prerequisite: MTE 0028. This course is a continuation of Electricity Specialty I. It is designed for job entry level training in the marine electrical field and includes instruction in reading schematic diagrams, use of wiring diagrams, DC and AC motor control operation, troubleshooting and repair of motor controls, distribution systems found aboard ships and marine cable identification. This course is a combination of classroom and laboratory experience.

#### **MTE 0070 Maintaining and Repairing Fuel Systems in Marine Diesel Engines**

Prerequisite: AER 0701 or consent of instructor. This course is designed to teach job entry level skills in the maintenance and repair of various fuel injection systems used in marine diesel engines. Topics include components' path flow, theory of operation, rebuilding fuel pumps, fuel injectors, speed control systems and fuel supply pumps. The student will become familiar with various fuel system test equipment in terms of POP testers, test stands, and test



flow comparators. Special emphasis will be given to safety and manufacturer's overhaul procedures.

#### **MTE 0090 Marine Technology - Welding Specialty I**

Prerequisite: MTE 0006 or permission of the instructor. 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. This course is a combination of classroom and laboratory experience.

#### **MTE 0091 Marine Technology - Welding Specialty II**

Prerequisite: MTE 0090. This course is a continuation of Welding Specialty I. It is designed to help prepare for job entry into the marine welding field and includes practice in shielded metal-arc welding in the vertical position using E6010 and E7018 electrodes in mild steel plate. It will also cover oxyacetylene cutting. This course is a combination of classroom and laboratory experience.

#### **MTE 0360 Adhesives**

This course is designed to teach job entry level skills. Topics covered include Glues, Compounds, and Beddings.

#### **MTE 0361 Fastening Materials**

This course is designed to teach job entry level skills. Topics covered include Types, Grades, Sizing and Methods of use.

#### **MTE 0362 Paints and Coatings**

This course is designed to teach job entry level skills. Topics covered include Compounds, Oils, Synthetics, and Application Techniques.

#### **MTE 0370 Plans, Tools, Terminology**

This course is designed to teach job entry level skills. Topics covered include boat plans, the offset table, lotting, hand tools, power tools, and terminology.

#### **MTE 0372 Wood Materials**

This course is designed to teach job entry level skills. Topics covered include: Types, Grades, Sizing, and Tooling of Wood Materials.

#### **MTE 0373 Fiberglass Materials**

This course is designed to teach job entry level skills. Topics covered include Resins, Cloth Materials, Formulas, and Techniques.

#### **MTE 0377 Fiberglass Boatbuilding**

Prerequisites: MTE 0360, MTE 0370, MTE 0373. This course is designed to teach job entry level skills. Topics covered include Molds, Laminating Techniques, Fairing, and Release Agents.

#### **MTE 0378 Fiberglass Boat Repair**

This course is designed to teach job entry level skills. Topics covered include Materials and Methods and Repair or Replacement of Faulty Areas.

#### **MTE 0381 Wooden Boatbuilding**

Prerequisites: MTE 0360, MTE 0361, MTE 0370, MTE 0372. This course is designed to teach job entry level skills. Topics covered include Techniques, and Fairing.

#### **MTE 0382 Wooden Boat Repair**

This course is designed to teach job entry level skills. Topics covered include Surveying, Maintenance, and Replacement.

#### **MTE 0383 Interior Joinerwork**

This course is designed to teach job entry level skills. Topics covered include Fitting, Installation, and Trim Carpentry.

#### **MTE 0384 Exterior Joinerwork**

Prerequisites: MTE 0370, MTE 0370, MTE 0372. This course is designed to teach job entry level skills. Topics covered include Decks, Cockpits, Coamings, Backings, and Laminating.

#### **MTE 0650 Welding and Boat Trailer Repair**

This course is designed to teach job entry level skills. Topics included are: introduction to basic arc welding, oxy-acetylene cutting, sandblasting, shop equipment necessary to facilitate actual trailer repair and safety.

#### **MTE 0652 Metals-Shapes and Application for Pipefitters.**

This course is designed to teach job entry level skills. Topics included are: Introduction to course requirements, shop equipment, safety, metal.

#### **MTE 0654 Pipefitters/Hand Tools, Power Tools, and Shop Equipment**

This course is designed to teach job entry level skills in recognition of safety and use of power tools and shop equipment.

#### **MTE 0655 Measuring Pipe and Layout Methods I**

This course is designed to teach job entry level skills. Topics are: pipe sizing, measuring offsets, determining fitting allowances, laying out offsets taking accurate measurements for material requirements.

#### **MTE 0656 Pipe Pattern Layout and Oxy-Acetylene Cutting**

This course is designed to teach job entry level skills. Topics included are: lay out of mitred joints, y-fittings, mitred elbows, and the selection and use of oxy-acetylene cutting equipment.

#### **MTE 0657 Blueprint Reading and Pipe Installation For Pipefitters**

This course is designed to teach job entry level skills. Topics included are: parts of a blue print, symbols, handling and care of types. Scaling prints, recognition, selection by size and type, proper allowances and installation of fittings, joint fitup, and proper selection of tools is also covered. Safety is stressed throughout.

**MTE 0661 Sil Brazing and Tackwelding For Pipefitters**

This course is designed to teach job entry level skills. Topics included are: joint preparation and fit up, selection of proper solder by type and proper equipment selection and set up, welding safety, welding machine set up and rod selection, basic shielded metal arc welding, practice welding and heat effects on metals. Military specifications will be taught.

**MTE 0662 Pipe Fabrication**

This course is designed to teach job entry level skills. Topics included are: calculating materials, tools and equipment to lay out a piping system, cut, thread, and fit pipe and tubing to specifications. Actual field conditions are simulated as close as possible.

**MTE 0663 Measuring Pipe and Layout Methods II**

Prerequisite: MTE 0655 or consent from the instructor. This course is a continuation of MTE 0655 and is designed to teach job entry level skills. Topics included are: calculating materials, tools and equipment to lay out a piping system, calculate bends and bend pipe using hydraulic bending machine, prepare pipe for flanges, align flanges and fit to targets. Actual field conditions will be simulated as close as possible.

**MTE 0900 EMP Refresher Basics for Marine Technicians**

This course is designed to provide reinforcement of basic knowledge needed in marine trade areas and includes instruction in shipyard/shipboard orientation, industrial safety, mathematics and blueprint reading.

**MTE 0902 EMP Introduction to Metal Work**

This course is designed to upgrade skills for individuals in marine pipefitting and metal fabrication and includes instruction in shop safety, tools and equipment usage, metal characteristics and steel shapes. The course includes a combination of classroom lecture and laboratory experience.

**MTE 0912 EMP Basic Oxyacetylene and Tack Welding for the Metal Fabricator**

This course is designed to upgrade skills for individuals 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 0914 EMP Introduction to Boatbuilding**

This course is designed to upgrade skills for individuals in boatbuilding trades and includes instruction in plan reading, tools and terminology.

**MTE 0916 EMP Materials for Boatbuilding and Repair**

This course is designed to upgrade skills for individuals in the boatbuilding/repair industry and includes instruction in wood, fiberglass and fastening materials used in industry. The course is a combination of classroom and laboratory experience.

**MTE 0918 EMP Boat Repairs**

This course is designed to upgrade skills for individuals in 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 0920 EMP Boatbuilding**

The course is designed to upgrade skills for individuals in 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 0922 EMP Interior and Exterior Joinerwork in Boatbuilding**

This course is designed to upgrade skills for individuals in the boatbuilding industry and includes instruction in planning, mountings, and rough-in techniques for cabins and decks.

**MTE 0924 EMP Introduction to Marine Electricity**

This course is designed to upgrade skills of individuals in marine trades and includes instruction in basic DC theory and AC theory. The course includes a combination of classroom and laboratory experience.

**MTE 0926 EMP Cable and Equipment Layout and Installation**

This course is designed to upgrade skills for individuals in the marine electricity field and includes instruction in the layout and installation of cable aboard ships. This includes a combination of classroom and laboratory experience.

**MTE 0930 EMP Shipboard Electrical Systems**

This course is designed to upgrade skills for individuals 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 0932 EMP Introduction to Marine Electronics**

This course is designed to upgrade skills of individuals in 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 0934 EMP Marine Electronic Functions and Systems**

This course is designed to upgrade skills of individuals in 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 0938 EMP Marine Electronic Digital and Computer Fundamentals**

This course is designed to upgrade skills of individuals in marine electronics and includes instruction in digital electronic system theory and computer circuits. The course



includes a combination of classroom and laboratory experience.

#### **MTE 0942 EMP Tune-Up of Marine Diesel Engines**

This course is designed to upgrade skills for individuals in the marine engine field and includes instruction in Detroit, Cummins and Caterpillar engines. The course is a combination of classroom and laboratory experience.

#### **MTE 0944 Maintaining and Repairing Fuel Systems in Marine Diesel Engines**

This course is designed to upgrade skills for individuals in 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 0946 EMP Troubleshooting Marine Diesel Engine Complaints**

This course is designed to upgrade skills for individuals in 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 0956 EMP Oxyacetylene and Air-Arc Cutting and Gouging for Marine Welding**

This course is designed to upgrade skills for individuals in 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 0958 EMP Shielded Metal-Arc Welding, Horizontal Position for Marine Welding**

This course is designed to upgrade skills for individuals in the marine welding field and provides instruction in shielded metal-arc welding in the horizontal position using E6019 electrodes on mild steel plate. It will also cover oxyacetylene cutting. The course includes a combination of classroom and laboratory experience.

#### **MTE 0960 EMP Shielded Metal-Arc Welding, Vertical Position in Marine Welding**

This course is designed to upgrade skills for individuals in 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 0962 EMP Shielded Metal-Arc Welding, Overhead Position in Marine Welding**

This course is designed to upgrade skills for individuals in 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.

#### **MTE 0966 EMP Pattern Layout for Marine Pipefitters**

This course is designed to upgrade skills for individuals

in the pipefitting field 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 0968 EMP Fittings Used in Marine Piping Systems**

The course is designed to upgrade skills for individuals in marine pipefitting 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 0970 EMP Basic Valves and Gauges Used in Marine Pipefitting**

This course is designed to upgrade skills for individuals 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 0974 EMP Basic Welding and Brazing for Marine Pipefitters**

This course is designed to upgrade skills for individuals 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.

#### **MTR 0601 Gas Metal Arc Welding**

Prerequisite: MTR 0604 or consent of instructor. This course is designed to provide entry level skills necessary to make high quality gas metal arc welds in all positions on mild steel from 1/16 inch sheet to 3/8" plate single pass and multiple pass, using short circuit transfer and to make high quality welds on aluminum using spray transfer.

#### **MTR 0602 Oxygen-Acetylene Welding and Brazing**

Prerequisite: MTR 0603. This course provides job entry level training in the welding field and presents technical information about oxygen-acetylene welding, brazing and braze welding using 16 gage through 3/16" mild steel, 16 gage stainless steel, and copper piping and fittings. Related information includes equipment operation and weld quality.

#### **MTR 0603 Welding Basic**

This course is designed to teach job entry level skills in fusing metal parts by means of welding rods and electrical welding apparatus to fabricate metal articles or to repair damaged metal objects. It also includes instruction and training in manual and machine oxyacetylene flame cutting.

#### **MTR 0604 Welding Advanced**

Prerequisite: MTR 0603. This course is designed to teach job entry level skills in shielded metal arc welding and welding safety. It provides training to develop the manual skills necessary to make high quality shielded metal arc welds in all positions on mild steel 3/8" plate, multiple pass butt joints and 1" plate lap joint and air arc gouging.

#### **MTR 0605 Shielded Metal Arc Welding Pipe (uphill)**

Prerequisite: MTR 0607. This course is designed to

teach job entry level skills in pipe welding nomenclature, weld quality, uphill pipe procedures and preheating and interpass heat elements. Topics covered include welding skills necessary to make high quality welds on open root mild steel pipe in the 5G, 2G, and 6G positions and mild steel pipe with backing rings in the 6G position.

#### **MTR 0606 Gas Metal Arc Welding Pipe**

Prerequisite: MTR 0605. This course is designed to teach job entry level skills in the welding field. Topics covered include: gas metal arc welding fundamentals, preparation for welding pipe and pipe effects. The course develops the manual skills necessary to produce high quality groove welds on 6 inch diameter steel pipe in the 2g, 5, and 6g positions.

#### **MTR 0607 Gas Tungsten Arc Welding (TIG) Pipe and Tubing**

Prerequisite: MTR 0608. This course is designed to teach job entry level skills in the welding field. Topics covered include: gas tungsten arc welding fundamentals, preparation and welding pipe and pipe welding defects.

#### **MTR 0608 Flux Cored Arc Welding Gas Tungsten Arc Welding (Basic)**

Prerequisite: MTR 0601. This course is designed to teach job entry level skills in the welding field. Topics covered include: flux cored arc welding and arc welding safety. Related topics include equipment operation and weld quality. It also provides training to develop the manual skills necessary to make high quality gas tungsten arc welds in all positions on 16 and 11 gage mild steel, 16 gage stainless steel and 11 gage aluminum, using both direct and alternating current.

#### **MTR 0621 Drill Press**

This course is designed to teach job entry level skills. Topics covered include: sensitive drill presses, common drill presses and the operation and function of all accessories. The student will also receive instructions in safety, calculations, and set-ups for various materials.

#### **MTR 0622 Shaper Series**

This course is designed to teach job entry level skills. Topics covered include 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.

#### **MTR 0623 Lathe Series**

This course is designed to teach job entry level skills. Topics covered include: safety, machine set-up, center drilling, alignment of centers, facing, filing, polishing, burring, taper turning, thread cutting, (internal and external) drilling, reaming, grooving and grinding.

#### **MTR 0624 Industrial Blueprint Reading**

This course is designed to teach job entry level skills. Topics covered include: how to interpret blueprints, visualization, understanding various views, alphabet of lines and symbols, and understanding supplementary information contained on prints.

#### **MTR 0625 Basic Numerical Control (NC)**

This course is designed to teach job entry level skills. Topics covered include: definitions of N.C. terms, N.C. control information, machine movements, program coordinate systems, programming of feedrate, miscellaneous functions, drilling, milling, control locations and operation of N.C. unit on the machine, zero set up, tool set up sheet, tape codes, and project programming.

#### **MTR 0627 Measuring Tools**

This course is designed for job entry level skills. Topics covered include: machine measurement in theory and manipulation training in safety, the use of scales, inside and outside micrometers (English and Metric), inside and outside calipers, telescope gages, combination set, and thread micrometers. Benchwork includes to be trained by mastering bench tools and portable tools for benchwork on the job.

#### **MTR 0628 Vertical Milling**

This course is designed to teach job entry level skills. Topics covered include 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.

#### **MTR 0629 Surface Grinders**

This course is designed to teach job entry level skills. Topics covered include: procedures for mounting and removing wheels, truing and dressing a grinding wheel, grinding of a flat surface, grinding the edges of a work piece square and parallel, and grinding an angular surface.

#### **MTR 0641 Basic Engine Parts/Engine Disassembly/Principles of Power**

This course is designed to teach job entry level skills. Topics covered include: engine parts identification, principles of power and engine disassembly.

#### **MTR 0642 Cleaning Engine Parts**

This course is designed to teach job entry level skills. Topics covered include: training in cleaning machines, cleaning products and methods of cleaning engine parts, with special emphasis put on safety in the use of the machines and chemicals.

#### **MTR 0643 Precision and Non-Precision Tools for the Automotive Trade**

This course is designed to teach job entry level skills in instrumentation used in the remanufacturing of automotive engines.



**MTR 0644 Identifying and Repairing Cracks**

This course is designed to teach job entry level skills in the identification and repair of cracks in automotive parts.

**MTR 0645 Automotive Reconditioning Machines I**

This course is designed to teach job entry level skills related to the operation of four machines commonly used in the automotive machine shop: Wet head grinder, valve grinder, valve seat grinder, and the piston pin machine.

**MTR 0646 Automotive Reconditioning Machines II**

Prerequisite: MTR 0645 or consent of instructor. This course is designed to teach job entry level skills and is a continuation of Automotive Reconditioning Machines I. Topics covered include the operation of the following four machines commonly used in the automotive machine shop: rod and cap grinder, precision honing.

**MTR 0647 Automotive Reconditioning Machines III**

Prerequisite: MTR 0646 or consent of instructor. This course is designed to teach job entry level skills and is a continuation of Automotive Reconditioning Machines II. Topics covered include the operation of the following four major machines commonly used in the Automotive Machine Shop: head machining center, flywheel grinder, milling, and brake service center.

**MTR 0648 Automotive Reconditioning Machines IV**

Prerequisite: MTR 0647 or consent of instructor. This course is designed to teach job entry level skills and is a continuation of Automotive Reconditioning Machines III. Topics covered include the operation of the following four major machines commonly used in the automotive machine shop: crankshaft straightener, crankshaft grinder, drill press, and engine lathe.

**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.

**NUR 0525 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.

**OFT 0131 Practical Business Mathematics**

This entry level course provides the student with the essentials of practical mathematics associated with the day to day operations of a business. Major emphasis of this course is placed on the review of basic mathematics and developing skills in the computation of percentages, compound interest, payroll and taxes. This course will be flexible in meeting needs of specific groups.

**OFT 0311 Word Processing Applications**

This course is designed to teach job entry level skills. The course provides learning opportunities in the concepts and applications of word processing. This will include the creation and revision of documents, stored text, use of special features, tables and special functions. To ensure marketing employment skills this course will cover Business English, Business Mathematics, Calculating Machines, Filing, Typewriting and Employability skills.

**OFT 0611 Microcomputer Entry Training Skills**

This microcomputer course is designed to develop high-tech information concepts and computer operation skills for entry-level employment. The attendees need no prior experience with personal computing to attend. The complete course consists of five modules: Disk Operating System and Microcomputer Hardware, Word Processing Applications, Electronic Spreadsheet Applications, Data Base Applications, and Programming in BASIC for Business.

**ORH 0041 Basic Floral Design**

The purpose of this course is to introduce students to employment opportunities and educational and personal requirements for employment in the florist industry. The class will include basic design construction, such as proper positioning of skeletal flowers and filler; cutting and wiring stems; and various mechanical aids. Skill application also includes round, horizontal, symmetrical, and asymmetrical designs. Each student will need to bring their own tools (scissors, wire cutters, knife, etc.). All flowers and basic supplies (foam, wire, tape, etc.) will be furnished.

**ORH 0043 Intermediate Floral Design**

Prerequisite: ORH 0041. The purpose of this course is to provide entry level job experience and an introduction to casket spray construction, specialty funeral designs, silk and dried arrangements, and party work. The student will also study the art of European design, Oriental design, and parallel construction. Laboratory experiences provide the student with hands-on experience.

**ORH 0045 Advanced Floral Design**

Prerequisites: ORH 0041, ORH 0043. This is the follow up course to ORH 0041, Intermediate Floral Design. In this course, the student will learn job preparatory techniques on how to coordinate a complete wedding. It will include designing bouquets, corsages, decorating the church, and setting up the reception.

**ORH 0510 Identification, Care and Handling of Foliage and Cut Flowers**

This entry level course is designed to introduce the student to the most common commercially produced flowering and foliage plants. The student will study basic plant morphology and physiology, plant identification, as well as the care of foliage and flowering plants in shops and homes. Instruction and learning activities are provided in a laboratory setting using hands-on experiences with the tools and materials appropriate to course content and in accordance with practices in the field.

**ORH 0610 Basic Floral Management**

This entry level course is designed to teach the student about buying, budgeting, keeping records, delivery, credit, billing, using a computer, managing employees, customer relations, planning for the holidays, advertising, and wire service reporting.

**ORH 0612 Advanced Floral Management**

Prerequisite: ORH 0610. This entry level course is designed to provide the opportunity to students to acquire knowledge and skills necessary to open a retail flower shop. This instruction will include the selection of location, studying traffic patterns, demographics, and the availability of capital. The student will acquire knowledge as to how to lay out the workroom, cooler, sales area and display window location. The student will display skills in selection of merchandise and products, and inventory control. The student will also learn about personnel, administration and controlling payroll and other expenses.

**ORH 0941 Floral Design Internship I**

Prerequisite: ORH 0041. Students will work in a retail florist shop nine hours per week. The instructor will work with the shop manager or owner to monitor student progress toward predetermined goals. Students will attend a two hour seminar on campus every other week.

**ORH 0942 Floral Design Internship II**

Prerequisite: ORH 0941. A continuation of ORH 0941. Students will work in a retail florist shop nine hours per week. The instructor will work with the shop manager or owner to monitor student progress toward predetermined goals. Students will attend a two hours seminar on campus every other week.

**ORV 0221 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.

**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 makeup and tinting. The paper hanging section covers materials and surface preparations. The drywall section covers tools and methods of application.

**PMT 0111 Oxygen-Acetylene Welding**

This course provides upgrading training in the welding field and presents technical information about oxygen-acetylene welding using 16 gage through 3/16" mild steel, related equipment operation and weld quality.

**PMT 0112 Oxygen-Acetylene Brazing and Braze Welding**

This course provides up-grading training in the welding field and presents technical information about oxygen-

acetylene brazing and braze welding using 16 gage through 3/16" mild steel, 16 gage stainless steel and copper piping and fittings. Related information includes equipment operation and weld quality.

**PMT 0131 Gas Tungsten Arc Welding Basic**

This course provides upgrading training in the welding field and presents technical information on gas tungsten arc welding fundamentals and welding safety. The training develops the manual skills necessary to make high quality gas tungsten arc welds in all positions on 16 and 11 gage mild steel, 16 gage stainless steel and 11 gage aluminum, using both direct and alternating current.

**PMT 0134 Basic Gas Metal Arc Welding**

This course provides upgrading training in the welding field and presents technical information on the basic gas metal arc welding fundamentals and welding safety. The training develops the manual skill necessary to make high quality gas metal arc welds in all positions on mild steel from 1/16" sheet to 3/8" plate single pass and multiple pass, using short circuit transfer.

**PMT 0135 Gas Metal Arc Welding - Advanced**

This course provides up-grading training in welding and presents technical information on welding safety and gas metal-arc welding of aluminum, including basic fundamentals, types of equipment and metal transfers.

**PMT 0141 Flux Cored Arc Welding**

This course provides up-grading training in the welding field and presents a thorough technical understanding of the flux cored arc welding process and arc welding safety. Related topics include equipment operation and weld quality.

**PMT 0167 Shielded Metal Arc Welding Pipe Downhill**

This course provides up-grading training in the welding field and presents a thorough technical understanding of shielded metal arc welding pipe downhill fundamentals and welding safety. The training develops the manual skills necessary to produce high quality welds on open root mild steel pipe in the 5g and 6g position, using cellulosic (exx10) electrode and downhill travel.

**PMT 0171 Gas Tungsten Arc Welding (TIG) Pipe and Tubing**

This course provides up-grading in the welding field and presents a thorough technical understanding of gas tungsten arc welding fundamentals, preparation and welding pipe and pipe welding defects.

**PMT 0173 Gas Metal Arc Welding Pipe**

This course provides upgrading training in the welding field and presents technical information on gas metal arc welding fundamentals, preparation for welding pipe and pipe welding defects. The training develops the manual skills necessary to produce high quality groove welds on 6 inch diameter steel pipe in the 2g, 5g and 6g positions.

**PMT 0184 Preparation for Plate Certification**

This course provides up-grading training in the welding field and presents technical information about the prepara-



tion required for plate certification using 3/8" mild steel plate. Related information includes equipment operation and weld quality.

#### **PMT 0185 Preparation for Pipe Certification**

This course provides up-grading training in the welding field and presents technical information about the preparation required for pipe certification using 6" schedule 80 steel pipe. Related information includes equipment operation and weld quality.

#### **PMT 0202 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.

#### **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 0410 Practical Nursing I**

This course is designed as job entry training to prepare a beginning practitioner of practical nursing. This first course consists of activities designed to familiarize the student with the basic needs of the well individual. The units progress from a study of the normal structure and function of the body, growth and development, health concepts and nutrition, to the common problems encountered during illness. Interpersonal relationships, principles and skills are included to assist the student in providing care for patients and families. Demonstrations and supervised practice are planned in a nursing laboratory for students to acquire basic skills prior to assignment in local hospitals for clinical experience.

#### **PRN 0420 Practical Nursing II**

This job entry training course is a continuation of Practical Nursing I and includes basic concepts and principles needed to care for the medically and/or surgically ill patient. Nutritional, psychosociological, pharmacological, rehabili-

tative and preventive aspects of care for all age groups are integrated throughout the program. Instruction is also provided in the specialty areas of maternal and newborn nursing, pediatric nursing and geriatric nursing. Students are assigned clinical experiences in selected areas of appropriate community agencies, planned to be concurrent with the theory presented in the classroom and based upon the student's level of learning.

#### **PTR 0010 Career Exploration and Guidance**

This course is designed to assist the individual explore career options for either choosing a career or making a career change.

#### **PTR 0015 Career Planning for Handicapped Students**

This course is designed to assist handicapped students by enhancing their career planning skills and placement into FCCJ 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.

#### **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.

#### **REE 0040 Real Estate Principles and Practices I**

This course provides students with the fundamentals of real estate and license law under the Florida statutes. It includes a study of the business and legal aspects of real estate ownership, contracts, deeds, titles, mortgage instruments, property law, and Florida Real Estate Commission governing policies and regulations relative to salespersons. Successful completion of this course and the end-of-course examination meets the Florida Real Estate Commission requirements.

#### **REE 0041 Real Estate Principles and Practices II**

Prerequisite: REE 0400 or Florida Real Estate Sales License. This course is designed to prepare students for the Florida Real Estate Broker's Examination. These students must be licensed Florida real estate salespersons who have been properly qualified by the Florida Real Estate Commission before being permitted to register for the course.

#### **RMI 0641 Life Agent Qualification Course**

The life agent's qualification course is designed to help prepare life agents for state license exams and initial training. The course shall consist of forty (40) hours of classroom instruction in life insurance, health insurance and annuities. A final examination covering life and health insurance will be given at the end of each course.

**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.

**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.

**SER 0300 Familiarization with Small Engines**

This course is designed to teach job entry level skills. Topics covered includes: familiarization with the small engine field, employer relations, special tool applications, precision measuring and practical applications of some electrical test/measuring equipment.

**SER 0301 Product Familiarization**

Prerequisite: SER 0300 or permission of instructor. This course is designed to teach job entry level skills. Topics covered include product identification using manufacturer's model numbering system, locating and removing various components on both self-propelled lawnmowers and riding mowers. Includes lecture and classroom experience.

**SER 0305 Rider Mower Engine Repair**

Prerequisites: SER 0300, SER 0361. Laboratory experience or permission of instructor. This course is designed to teach job level skills. Topics covered include instruction and hands-on experiences on the tune-up procedures and maintenance repairs on many lawn and garden equipment necessary. It is required for the job entry level mechanic and completion certificate.

**SER 0306 Drive Systems**

Prerequisite: SER 0300, SER 0301 or permission of instructor. This course is designed to teach job entry level skills. Topics covered include instruction on the drive system of riding lawnmowers, garden tillers, compliance lawnmowers, and mower battery maintenance. Includes lecture and classroom experiences.

**SER 0313 Construction of Small Engines**

Prerequisite: SER 0300 or permission of instructor. This course is designed to teach job entry level skills. Topics covered includes: necessary familiarization with the working parts of a small gasoline engine, and at the same time provides technical information on the operation of these small engines.

**SER 0361 Troubleshooting**

Prerequisite: SER 0300. This course is designed to teach job entry level skills. Topics covered include troubleshooting problem areas on actual equipment.

**SER 0381 Ignition - Systems**

Prerequisite: SER 0300. This course is designed to teach job entry level skills. Topics covered includes: an in-depth study of the ignition systems used on small gasoline engines, both classroom lecture and shop experience on single and multi-cylinder engines.

**SER 0385 Fuel Systems - Small Engines**

Prerequisite: SER 0300. This course is designed to teach job entry level skills. Topics covered includes: an in-depth study of various small engines fuel system including tanks, lines, filters, pumps, carburetors, governors, classroom lectures and shop experience.

**SHM 0309 Sheet Metal**

Corequisite: IMTS. This course is designed specifically for job entry training in fabricating, assembling, altering, repairing, and installing sheet metal articles and equipment.

**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.

**SLS 0006 Career Planning**

This course is designed to assist students in exploring career options so as to upgrade their present work status and better themselves. Emphasis will be on developing self-confidence, assertive communications skills, life directions and goals. Career, school and work options will be explored.

**SLS 0335 Computer-Assisted Career and Job Search Guidance**

This course will help students explore career options that lead to upgrading their present work status, alternative job opportunities and educational institutions that provide upgrading opportunities in the State of Florida. This course is taught through the use of the CHOICES career guidance computer and will require scheduled, on-line computer time.

**SLS 0336 Job Seeking and Keeping Skills**

This course will provide students with an understanding of the world of work and will also provide students the necessary skills to conduct a job search and to obtain employment that would upgrade their present work status. This course will cover such topics as job market trends, using job sources, applying for jobs, writing a resume, interviewing and how to keep a job once obtained.



### **SLS 0341 Employability Skill**

This course is designed to assist students with an understanding of the world of work and to provide them with the skills necessary to conduct a job search, and obtain employment. The course will cover such topics as sources for the job applications, resume writing, interviewing skills, interpersonal relations for keeping the job.

### **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 to punctuate; to develop command of the mechanics of English; to handle the problems of office dictation, and to teach efficient transcription techniques.

### **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 0309 Office Occupations I**

Corequisite: IDS 0010. This course is the first of three sequential courses designed for job-entry level training in the field of office occupations and includes typewriting, business English, filing and office machines.

### **STS 0310 Office Occupations II**

Prerequisite: STS 0309 or permission of the instructor. Corequisite: IDS 0011. This course is the second in a series of three courses designed for job-entry level skills in the area of office occupations and includes typewriting, business English, record keeping, and shorthand.

### **STS 0311 Office Occupations III**

Prerequisite: STS 0310 or permission of the instructor. Corequisite: IDS 0012. This is the last course in a series of three designed for job-entry level skills in office occupations

and includes typewriting, business English, record keeping, machine transcription and business mathematics.

### **STS 0810 Surgical Technology I**

This course is a combination of classroom work, studies, and clinical experience in the operating room, recovery room and delivery room which prepares students to assist surgeons, anesthesiologists and nurses with patient care and related services. It is designed specifically for job entry training. Upon successful completion of the program, graduates are qualified to take a national certifying examination to become a Certified Surgical Technologist (CST). 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 0820 Surgical Technology II**

This course is a continuation of some of the skills presented in Surgical Technology I's combination of classroom work, studies, and clinical experience in the operating room, recovery room and delivery room which prepares students to assist surgeons, anesthesiologists and nurses with patient care and related services. It is designed specifically for job entry training. Upon successful completion of the program, graduates are qualified to take a national certifying examination to become a Certified Surgical Technologist (CST). 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.

### **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.

## **SPECIAL SERIES COURSES**

### **Cooperative Education**

---

#### **-----0948 Apprenticeship Cooperative Education**

This course will provide on-the-job training that parallels and reinforces training received in the related or classroom portion of the apprenticeship program.

#### **-----0949 Vocational Cooperative Education**

Course options A-D provide job entry level training that corresponds with the second through the fifth level of training in a vocational program. The student will receive a combination of classroom and on-the-job instruction in his/her occupational area.

## High School Diploma, GED and Adult Basic Education Courses

### Continuing Education Course Descriptions

---

#### **ABE 0100 Adult Basic Education**

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.

#### **AHS 0101 English I High School Cr. 1**

This course provides instruction in English language skills including reading, writing, speaking, and listening in the content areas of literature.

#### **AHS 0102 English II High School Cr. 1**

This course provides instruction in English language skills and in the study of world literature. The content includes, but is not limited to, instruction in reading and vocabulary necessary for comprehension of printed materials. Literature study emphasizes analysis of selections found in the world literature. The study of language includes grammar, mechanics, usage and other conventions of standard written English. The study of mass media includes an analysis of propaganda and persuasion techniques. Speech instruction includes analysis of effective techniques in oral presentations. The course includes composition instruction.

#### **AHS 0103 English III High School Cr. 1**

This course provides instruction in American Literature and in English language skills. It provides a programmed approach to mid-level high school grammar and usage, effective sentence structure, capitalization, and punctuation. It is designed to give practice in writing multi-paragraph papers of various types, including documented papers. Reference and summarizing skills are also covered. Listening, speaking, and writing assignments will be related, when appropriate, to the study of American Literature. Literature study includes the analysis of various examples of American literary works in various genres. Vocabulary study focuses upon verbal analogies and other patterns commonly found in standardized tests.

#### **AHS 0104 English IV High School Cr. 1**

This course provides high level instruction in English Language Skills. The content includes instruction in vocabulary and reading necessary for students' comprehension of printed materials. Literature study includes representative examples from British Literature. Writing experiences are structured to provide practice in real-life writing situations likely to be encountered beyond secondary school. Opportunities are given to students for extending their speaking and listening skills.

#### **AHS 0105 Business English I High School Cr. 1**

This course provides instruction in English Language Arts, with emphasis upon specific language skills as they relate to various occupations. The content includes instruction in personal and business communications, both oral and written; language study with emphasis upon practical

applications of standard English mechanics and usage; vocabulary study with emphasis upon specialized vocational terminology, and interpersonal relationships in Business Environments through the study of literature.

#### **AHS 0121 World Literature High School Cr. 1**

This course studies selected works of western and eastern literature from ancient times to the present. The content includes literature selections which are representative of particular cultures as well as indicative of world literary movements. Selections include fiction, nonfiction, and poetry. The course provides opportunities for writing both formal and informal papers based upon the literature.

#### **AHS 0122 American Literature High School Cr. 1**

The purpose of this course is to study selected American literary works of various genres in relationship to the development of the distinctive qualities of the national literature. The content includes instruction aimed at understanding the political, cultural, social and historical forces and movements in America as reflected in its literature. Content also includes the tenets and characteristics of puritan, transcendental, romantic, realistic, naturalistic, modern, and contemporary movements. In addition this course contains writing assignments based upon literature, emphasizing the development of insight, taste, and critical judgement.

#### **AHS 0123 British Literature High School Cr. 1**

The purpose of this course is to study British Literary works of various genres in relationship to the historical and cultural forces which influenced them, and to develop understanding of the various literary movements in British Literature. The content includes representative works of poetry, drama, fiction, nonfiction, novels, biographies, and literary criticism. Selections are from the following literary periods: Anglo-Saxon, Medieval, Elizabethan, Reformation, Neo-Classical, Romantic, Victorian, Modern, and Contemporary. The course provides students with opportunities for interpreting the literature through oral and written analysis.

#### **AHS 0150 Functional Basic Skills In Communications High School Cr. 1**

This course provides instruction for students to develop competencies in the practical communications skills of reading and writing, as measured by the statewide student assessment test, part I and II. The student will learn how to fill out applications, prepare a resume, write business and social letters, prepare a bibliography, write and comprehend ads in newspapers, and other important types of writing needed for success in school, on the job and in social life.

#### **AHS 0151 Writing I High School Cr. 1/2**

Prerequisite: AHS 0102 or its equivalent. This course provides an organized study of both sentence and paragraph structure. These are shaped into larger patterns via written assignments which are based upon personal experiences, observations, and literature. Emphasis is placed on form and content as well as manuscript preparation. Other areas of concentration are the following: diction, coherence and transition, mechanics of grammar and



punctuation and spelling. Also included are the skills needed for selecting and limiting a topic, arranging support, outlining, drafting, and revision.

**AHS 0152 Writing II High School Cr. 1/2**

**Prerequisite:** AHS 0151. This course extends the development of skills introduced in Writing I. It focuses on refining exposition and introduces analysis and persuasion. In addition, tone, syntax and figurative language are taught. A major emphasis is placed on the skills needed for revision. Personal writing techniques continue to be improved through practice of re-writing, drafting and improved editing.

**AHS 0153 Remedial/Compensatory Writing Skills High School Cr. 5**

This course will provide preparatory and remedial writing skills assistance to students who have not passed the State Student Assessment Test, Part I (SSAT I). This course will be counted as an elective.

**AHS 0201 General Science High School Cr. 1**

This course provides students with experiences and activities to acquaint the student with the concepts of physical, life and earth/space sciences.

**AHS 0202 Earth/Space Science High School Cr. 1**

This course provides opportunities for the student to develop concepts basic to the earth, its materials, processes, history and environment in space.

**AHS 0203 Environmental Science High School Cr. 1**

This course provides the student with the study of man's interaction with the environment. The content includes forms of pollution, conservation, environmental planning and policy, public land usages, population dynamics, and major forms of energy.

**AHS 0250 Anatomy and Physiology (with Lab) High School Cr. 1**

This course provides students with exploratory activities in the structures and functions of the components of the human body.

**AHS 0251 Botany (with Lab) High School Cr. 1**

This course provides students with an in-depth study of the plant kingdom. The content includes but is not limited to, plant cell anatomy and physiology, plant genetics, plant classification and use of taxonomic key, comparative plant anatomy and physiology, plant responses, plant life cycles, ecology, and importance of plants to man.

**AHS 0252 Chemistry I High School Cr. 1**

This course covers the areas of elements and compounds, oxygen and hydrogen, water and solutions, carbon and its oxides, and acids, bases and salts.

**AHS 0253 Physical Science (with Lab) High School Cr. 1**

This course is designed to acquaint the individual with various aspects of the physical sciences. It includes elements of physics, chemistry, geology, astrology, meteorol-

ogy and other selected physical science topics. A laboratory experience is included.

**AHS 0255 Biology I 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. This course will provide "hands-on" experiences as well as providing activities that will acquaint students with scientific procedures and equipment.

**AHS 0300 Remedial/Compensatory Mathematics Skills III High School Cr. 1**

This course will provide preparatory and remedial mathematics skills assistance to students who have not passed the State Student Assessment Test, Part I (SSAT I). This course will be counted as an elective.

**AHS 0301 Fundamental Mathematics II High School Cr. 1**

This course is designed to ensure competency in computation with integers, fractions, and decimals. Practical application of percentage and measurements, including the metric system, is stressed.

**AHS 0302 General Mathematics III High School Cr. 1**

This course is designed to satisfy the needs of individuals whose interests require a knowledge of modern general mathematical skills and concepts.

**AHS 0303 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. This course also incorporates problems involving proprietorship, payrolls, sales, discounts, simple interest, compound interest, and financial statements in its content.

**AHS 0304 Business Mathematics I High School Cr. 1**

This course is designed to cover problems involving proprietorship, sales, profits and losses, payroll, simple interest and real estate. Problems dealing with integers, fractions and decimals commonly used in business, such as; insurance, bonds, compound interest, and corporation and financial statements are incorporated within the course.

**AHS 0320 Pre-Algebra 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.

**AHS 0321 Algebra I High School Cr. 1**

This course is designed as an introduction to algebra with emphasis on fundamentals, the solution of equations, and the application of equations to everyday problems.

**AHS 0322 Geometry High School Cr. 1**

This course is designed to deal 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. Additionally, special emphasis is placed on congruent triangles.

**AHS 0323 Algebra II High School Cr. 1**

This course is designed as a continuation of Algebra I with emphasis on fractions, fractional equations, quadratic equations, elementary trigonometry, ratio and proportion, and radicals.

**AHS 0401 American History High School Cr. 1**

This course is designed to place emphasis on political, economic, and social development of the United States from colonization to the present.

**AHS 0402 American Government High School Cr. 1/2**

This course includes a study of such topics as the constitution; legislative, executive and judicial branches, and functions of national, state and local government; evolving role of political parties and interest groups in determining government policy; elections; and citizenship.

**AHS 0404 World History High School Cr. 1**

This course examines the political, economic, social, religious, military, dynastic, scientific and cultural events that have affected humanity by covering the chronological development of civilization.

**AHS 0405 Economics High School Cr. 1/2**

This course provides students the opportunity to acquire an understanding of the way in which society organizes its limited resources to satisfy unlimited wants. The student will be introduced to the major characteristics of the mixed market economic system. The major emphasis is to provide the students with an understanding of the forces of the marketplace by examining the effect on the system of their roles as producer, consumer, saver, investor, resource owner, voter, and taxpayer.

**AHS 0500 Remedial/Compensatory Reading Skills High School Cr. 1/2**

This course will provide preparatory and remedial reading skills assistance to students who have not passed the State Student Assessment Test, Part I (SSAT I). This course will be counted as an elective.

**AHS 0501 Reading I High School Cr. 1**

This is a diagnostic, prescriptive course in reading designed to begin at the student's level in rate and comprehension. 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 reading comprehension.

**AHS 0502 Reading II High School Cr. 1**

This is a diagnostic, prescriptive course designed to de-

velop the student's vocabulary and comprehension. Efforts are concentrated on developing reading skills essential for generalized high school materials. Group and individual instruction and a variety of machines and materials are available to achieve a grade level of 10.5 in reading.

**AHS 0601 Health I, Life Management Skills High School Cr. 1/2**

This course is a study of the human body. It also provides the student with the opportunities to develop and enhance critical life management skills necessary to make sound decisions and take positive actions for healthy living.

**AHS 0701 Employability Skills High School Cr. 1/2**

This course provides those students entering the world of work with the basic knowledge needed to help secure a job, improve personal development, and increase the opportunity for job success.

**AHS 0702 General Business High School Cr. 1**

This course provides the students with a basic understanding of general business practices as they relate and have application to their everyday business affairs.

**AHS 0703 Bookkeeping High School Cr. 1**

A course designed to provide meaningful business problems to the beginner level, to equip students with basic vocabulary skills, to provide students with an understanding of business forms and to help them develop proper work habits and attitudes.

**AHS 0711 Typewriting, Personal 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.

**AHS 0712 Clerk-Typist High School Cr. 1**

**Prerequisite:** AHS 0715. 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.

**AHS 0715 Shorthand, Personal High School Cr. 1/2**

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 other personal use activities.

**AHS 0731 Child Development, Guidance and Care 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.

**AHS 0741 Clothing and Textiles High School Cr. 1/2**

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. The student will learn about the selection, use, and care of modern sewing and pressing equipment. The course culminates in the completion of a simple garment, and selection of suitable accessories. In addition the course prepares students to understand the social psychological and physiological aspects of clothing and textiles as well as the effect of consumer choices on the individual and family.

**AHS 0745 Fundamentals of Interior Design Services 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.

**AHS 0761 Drafting, Mechanical High School Cr. 1**

This course provides instruction in drafting as a form of graphic communication to express ideas and convey information by means of geometric shapes, lines, and dimensions. The content includes, but is not limited to, the visualization of objects in three dimensions, preparation of working drawings, reading drawings and prints, using drafting tools and materials, and providing substantial practice in drafting techniques.

**AHS 0801 Drawing and Painting I High School Cr. 1**

This course is a study of the fundamentals of drawing and painting, concepts of drawing principles and composition, and a study of techniques.

**AHS 0821 Drama I High School Cr. 1**

This course provides an in-depth theatrical experience in planning and execution of production functions: scene construction and painting, props, costuming, acting, lighting and other full technical responsibilities.

**AHS 0822 Drama II High School Cr. 1**

This course provides intermediate development in the study and practice of theater arts. The content includes instruction in reading and interpretation of dramatic literature. Students will be introduced to techniques and mechanics of acting including the following: scenery construction, costume and lighting design, as well as other features of stagecraft; character analysis and portrayal; interpretive study of plays; and production of plays.

**AHS 0841 Chorus I High School Cr. 1**

This course includes both individual and group singing, with emphasis on group vocal experience that may be useful to the individual who participates in community musical activities.

**AHS 0911 Advanced Reading High School Cr. 1/2**

This is a diagnostic, prescriptive, advanced reading course designed to increase reading speed and further improve reading skills and comprehension.

**AHS 0915 Creative Writing High School Cr. 1**

This course develops students' writing and language skills needed for individual expression in literary forms. The content includes instruction in the development and practice of writing a variety of literary works.

**AHS 0941 World Geography High School Cr. 1**

A general course in geography includes a study of the physical, economic, political, religious, and cultural aspects of important geographic areas and people, and their influence on world conditions and problems.

**AHS 0942 Psychology High School Cr. 1/2**

This course is designed to provide students with a variety of perspectives for dealing with and understanding human behavior. The emphasis of the course is on application of psychology to life situations encountered by most individuals.

**AHS 0943 Sociology High School Cr. 1/2**

This course includes the study of cultural influence on our society, the forms, institutions, and the relationships between the sexes, racial and ethnic groups.

**AHS 0944 Humanities to 1500 High School Cr. 1/2**

The purpose of this course is to examine and respond to creative efforts from early civilization through the 1500's. The content will include, but not be limited to, providing opportunities for students to explore, analyze, synthesize and respond in a variety of ways to cultural traditions. These ways include viewing, listening, speaking, reading, writing, performing and creating. Students should gain an appreciation for, and an understanding of, themselves and their world through an interdisciplinary approach involving the study of painting, sculpture, architecture, music, dance, drama, history, literature, philosophy, and religion.

**AHS 0945 Humanities Since 1500 High School Cr. 1/2**

The purpose of this course is to examine and respond to creative efforts from the post-Renaissance through the contemporary period. The content will include, but not be limited to, providing opportunities for students to explore, analyze, synthesize and respond in a variety of ways to cultural traditions. These ways include viewing, listening, speaking, reading, writing, performing and creating. Students should gain an appreciation for, and an understanding of, themselves and their world through an interdisciplinary approach involving the study of painting, sculpture, architecture, music, dance, drama, history, literature, philosophy and religion.

**AHS 0946 Law Studies High School Cr. 1/2**

The purpose of this course is to acquaint the student with the various phases of law that affect everyday life. Included are topics such as the basis of the legal system, the organization of the legal system, criminal and juvenile justice, consumer law, the civil court and social values and their impact on interpretations of the law, and the supremacy.

**AHS 0949 Civics High School Cr. 1**

This course deals with the structure and function of government at the local, state, and national levels. Content includes the American Constitutional Government and the free enterprise system.

**AHS 0951 French I High School Cr. 1**

This course provides students with beginning skills in listening and speaking with emphasis on pronunciation of words in introductory French.

**AHS 0952 French II High School Cr. 1**

This course, a continuation of AHS 0951, is adapted to the needs and interests of adults who wish to improve and expand speaking and oral comprehension abilities which were begun in French I.

**AHS 0953 Spanish I High School Cr. 1**

This course provides students with elements of grammar; with conversation and composition, and reading of Spanish texts.

**AHS 0954 Spanish II High School Cr. 1**

This course is a continuation of AHS 0953, is adapted to the needs and interests of students who wish to improve and expand speaking and oral comprehension abilities which were begun in Spanish I.

**AHS 0955 German I High School Cr. 1**

This course is adapted to the needs and interests of students who wish to acquire a speaking and oral comprehension ability in introductory German.

**AHS 0957 Conversational Italian I High School Cr. 1**

This course provides conversational abilities in the areas of travel, vocational subjects, and self-enrichment to the students who do not desire a formal knowledge of grammar or literature as taught in the regular programs. The emphasis is on oral communication and useful everyday expressions.

**AHS 0961 Health II, Personal Health High School Cr. 1/2**

Prerequisite: AHS 0601. This course is a continuation of Health I, Life Management Skills and continues the study of health as it applies to the individual students, their families and the larger community in which they live. The course provides students with knowledge and skills necessary for making sound health decisions.

**AHS 0962 Personal Fitness High School Cr. 1/2**

The purpose of this course is to provide students with opportunities to develop an individual optimal level of physical fitness, acquire knowledge of physical fitness concepts,

and acquire knowledge of the significance of life-style on one's health and fitness. The content should include, but not be limited to, knowledge of psychological values of physical fitness including stress management, knowledge of sound nutritional practices, and knowledge of consumer issues related to physical fitness.

**AHS 0971 Introduction to 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.

**AHS 0972 Computer Applications High School Cr. 1/2**

The purpose of computer applications is to introduce students to the care and uses of microcomputers and to give them an opportunity for as much "hands-on" experience as possible. The content includes, but is not limited to, simple programming and the use of commercially available software.

**GED 0100 High School Review**

The General Education Development (GED) tests are designed to provide an opportunity to earn a high school equivalency diploma. Academic areas covered are: writing skills (which include composing an essay), social studies, science, interpreting literature and the arts, and mathematics.

**GED 0200 General Education**

Instruction in general education subjects, including 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.

**GED 0300 GED Testing Skills Seminar**

This course provides critical, to-the-point information about the High School Equivalency Examination. The goal is to familiarize students with the general format of the test, and with the types of questions that will be asked. During the course of the seminar, students will be given the GED test philosophy, statistics regarding the exam, guidelines for successful test-taking in general, and an opportunity to discuss any questions they may have about the examination. The course includes a test structured similarly to the GED test.

**GED 0301 Mathematics Skills**

This course will provide preparatory and remedial mathematics skill assistance to students who have not passed the State Student Assessment Test, Part II (SSAT II).

**GED 0302 Communication Skills**

This course will provide preparatory and remedial communication skill assistance to high school students who have not passed the State Student Assessment Test, Part II (SSAT II).



### **SLD 0100 English for Speakers of Other Languages I**

The purpose of this course is to provide instruction to speakers of other languages who are classified as less than independent in English. The main goal of the program is the acquisition of English communications skills by the student.

### **SLD 0200 English for Speakers of Other Languages II**

This course provides instruction in language arts skills of listening and speaking to speakers of a language other than English. Emphasis is placed on developing student's speaking, listening, reading and writing skills.

### **SLD 0300 English for Speakers of Other Languages III**

This course provides instruction to native speakers of a language other than English, in developmental language arts skills including listening and speaking. Students will practice both listening comprehension and conversational patterns through individual and group presentations.

### **SLD 0400 English for Speakers of Other Languages IV**

This course provides instruction on the language arts skills of listening, speaking, reading and writing to speakers of a language other than English. The course will focus on increasing reading comprehension and writing brief paragraphs, using the process format and standards of acceptable writing.

## **Lifelong Learning Courses**

The Open Campus' Lifelong Learning Program at Florida Community College at Jacksonville provides courses and activities that address the individual development of adult learners and respond to community educational needs in Duval County.

The Lifelong Learning Program serves as a catalyst for:

- ...exploring relevant issues
- ...explaining timely ideas
- ...improving academic competencies, and
- ...providing opportunities for lifelong learners to reach their full potential

All of these courses are not offered every term, so interested persons should check the Continuing Education 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 FCCJ campuses, community schools and other off-campus centers.

Registration is on a first-come basis.

### **LLL 0100 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.

### **LLL 0101 Our Environment**

This course is a seven part video series focusing on issues relevant to Jacksonville's surroundings. The program titles include: "Our Historical and Physical Development - Striving for Balance", "The St. Johns River: A Multipurpose Resource", "The St. Johns River: Its Changing Nature", "Our Air", "Hazardous Waste", "Our Personal Environment", and "Moving Jacksonville Into The Future." Curriculum guides are also provided.

### **LLL 0102 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 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.

### **LLL 0200 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.

### **LLL 0201 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.

### **LLL 0202 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.

### **LLL 0203 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.

### **LLL 0204 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, re motivation, and use of leisure time.

**LLL 0205 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.

**LLL 0206 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.

**LLL 0207 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 coronary risk. It also provides education to family members and helps improve the quality of life for those involved with the program.

**LLL 0208 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.

**LLL 0209 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.

**LLL 0210 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.

**LLL 0211 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.

**LLL 0212 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.

**LLL 0213 Dynamics of Alcoholism**

This course is designed to introduce the student to the problems of alcohol dependency. Topics will include the medical, psychological and social implications of alcoholism. Prevention and treatment issues will be covered. Alcohol dependence among women, the elderly, blacks and adolescents will be examined. The impact of alcoholism on job efficiency and relations with co-workers and others will also be considered.

**LLL 0214 Total Wellness: A Holistic Approach to Good Health**

This course is designed for senior adults stressing the importance of caring for one's own health, and assuming the responsibility. The course emphasizes the total person; the physical, intellectual, spiritual, emotional and social aspects of the individual are addressed and preventive techniques are demonstrated which lead to optimum well being.

**LLL 0215 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.

**LLL 0216 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.

**LLL 0300 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.

**LLL 0301 Safety Education**

This course is designed to cover the principles and information related to individual, home, and public safety.

**LLL 0302 Personal Safety**

This course is designed to provide skills, knowledge,



training and information in securing one's personal safety in the home as well as self-defense and street safety.

### **LLL 0303 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.

### **LLL 0304 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.

### **LLL 0400 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.

### **LLL 0401 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.

### **LLL 0402 Assertive Communication Training I**

The course includes the theory and practice of assertive behavior; awareness of one's interpersonal rights; distinguishing among nonassertive, 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.

### **LLL 0403 Pre-Release Program for the Incarcerated**

This pre-release program has been created to offer guidance and counseling to the incarcerated in transition from confinement to freedom. This program will provide the means for reintegrating and readjusting the offender back into the community.

**LLL 0404 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.

### **LLL 0405 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.

### **LLL 0406 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.

### **LLL 0470 Foreign Languages**

The purpose of this course is to provide students with instruction that will either introduce or reinforce fundamental skills in the target language and its culture developing communication skills and cross-cultural understanding. The course content may include, but not be limited to: listening, speaking, reading, and/or writing skills toward language fluency as well as an emphasis on intercultural awareness.

### **LLL 0480 Health**

The purpose of this course is to provide students with opportunities to examine comprehensive health issues important to proper human development. The course content may include, but is not limited to: physical, social and emotional development, family life, nutrition, safety and first aid, prevention of diseases, consumer health, substance use and abuse, and community and environmental health.

### **LLL 0490 Science**

This course is designed to provide students with experience and activities in the concept of physical and natural sciences. The content may include, but not be limited to: scientific processes, human anatomy and physiology, Earth and its changes, astronomy, chemical changes in matter, and energy and its changes.

### **LLL 0500 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.

### **LLL 0501 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.

### **LLL 0502 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.

#### **LLL 0510 ART**

This course will provide opportunities for students to explore and develop techniques in art. Students can expand their insights into the world of art through one or all of the various art media.

#### **LLL 0540 Community Resources**

This course is designed to provide timely information regarding the availability of community resources which might assist students in improving and enhancing their quality of life. This course may include, but is not limited to: providing tips on utilizing resource people, governmental agencies, associations, clubs, educational institutions, and exemplary programs in Duval County.

#### **LLL 0550 Computer Education**

This course will provide students with the opportunity to understand the capabilities, applications and implications of computer and microcomputer concepts. The content may include, but not be limited to, computer components, terminology, problem solving, role and implications of computers in society, the use of commercially available software and simple programming.

#### **LLL 0560 Consumer Education**

This course is designed to provide students with consumer information that will allow them to make informed purchases of products and services. The content may include, but not be limited to: consumer rights and responsibilities, interaction of the consumer and the economy, family lifestyles, successful financial planning, uses of alternative resources, consumer credit, consumer buying, consumer legislation, and the effects of advertising.

#### **LLL 0570 Dance**

This course is designed to provide the student with opportunities to explore and develop techniques in dance. The course content may include, but not be limited to: terminology, dance history, basic movements, dance forms (ethnic dance, jazz, ballet, modern dance, tap, etc.), choreography, dance injuries and their prevention, performance, direction, and dance critique.

#### **LLL 0580 Drama**

This course is designed to provide a broad overview of the study and practice of dramatic arts. The course content may include, but is not limited to: the history of drama, its traditions, literature, theater operations, theater productions, techniques and mechanics of acting, playwriting, direction, and choreography.

#### **LLL 0600 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.

#### **LLL 0601 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.

#### **LLL 0602 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.

#### **LLL 0603 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.

#### **LLL 0604 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.

#### **LLL 0605 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.

#### **LLL 0606 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.

#### **LLL 0607 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.



### **LLL 0608 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.

### **LLL 0609 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.

### **LLL 0610 Human Sexuality**

This course is comprised of a series of classes for individuals interested in the field of human sexuality education. Information and learning experiences will enable participants to clarify their own personal feelings and values regarding sexuality and become more knowledgeable of psychological, sociological and biological contributions in the field of human sexuality.

### **LLL 0620 Humanities**

This course will provide instruction which introduces students to the study of man's cultural heritage. Students will have an opportunity to explore, examine, and respond to the world from the earliest civilization up through present day societies. The content may include, but not be limited to, defining the humanities in relation to history, literature, religion, philosophy, art, music and architecture. An interdisciplinary approach may be employed to assist students in formulating their own values and understanding the influence of the humanities on their life, society and mankind.

### **LLL 0630 Language Arts**

The purpose of this course is to provide students with instruction in communications. The course content may include, but is not limited to: developing reading, writing, speaking, listening, and observing skills; critical thinking and problem solving; and the study of classic and/or contemporary literature.

### **LLL 0640 Media**

This course is designed to provide opportunities for students to develop introductory skills in the use of various media. This course may include, but not be limited to: the identification of basic techniques to locate, organize, and present information; the study of library media (research, self study, and information processing); and the development of specialized skills in audiovisual production utilization techniques; operation; and maintenance.

### **LLL 0650 Mathematics**

This course is designed to provide opportunities for students to review and continue the development of basic

mathematics skills. The course content may include, but not be limited to: numerators, whole numbers, decimals, fractions, percents, measurements, algebra, problem solving, knowledge and use of calculators, probability, statistics, and other higher level mathematical disciplines.

### **LLL 0660 Music**

This course provides student with opportunities to study music in its various modes and manifestations, develop an understanding of the elements of music, and build skills in its performance. The course content may include, but not be limited to: music appreciation and awareness; active participation in singing, listening, and playing instruments; care and maintenance of instruments; interpretation; and composing.

### **LLL 0680 Physical Education**

This course provides opportunities for students to develop skills and acquire knowledge of physical and human development. The course content may include, but not be limited to: developing an understanding of the significance of lifestyle on one's health and fitness, skills needed for successful participation in lifelong physical activities, social competencies, and exercise safety awareness. Students may participate in specific forms of physical activity to enable them to develop skills and foster an appreciation through participation.

### **LLL 0690 Safety and Driver Education**

This course will provide information regarding safety and driver education. The course may include, but not be limited to, providing skills, knowledge, training and information in securing one's personal safety in the home as well as self-defense and street safety. Further, this course may provide education to drivers of various vehicles regarding the operation and safe use of such vehicles.

### **LLL 0700 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.

### **LLL 0701 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.

### **LLL 0702 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.

#### **LLL 0703 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.

#### **LLL 0704 Career Assessment and Guidance**

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.

#### **LLL 0705 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.

#### **LLL 0706 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.

#### **LLL 0710 Social Studies**

This course is designed to provide opportunities for students to develop an understanding of how individuals, groups, governments, and economic systems relate to each other. The course content may include, but not be limited to: the study of the future, world cultures, civilizations, religions, world and bible history, political and social systems, and the development of American values and institutions.

#### **LLL 0800 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.

#### **LLL 0801 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.

#### **LLL 0802 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.

#### **LLL 0803 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.

#### **LLL 0804 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.

#### **LLL 0805 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.

## **Recreational Courses**

### **(Self-Supporting Courses)**

Florida Community College at Jacksonville offers 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. For more information call the open campus, 633-8321.

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	LEI	0810	Fine Arts Enrichment Center Summer Program
ART	0815	Metal Sculpture	LIS	0810	Reading for Leisure
ART	0816	Macrame I	LIT	0810	Book Review
ART	0817	Macrame II	LIT	0812	Women in Literature
ART	0818	Creative Art for Children	LIT	0814	The Southern Literary Renaissance
ART	0820	Stained Glass Window Construction	LTW	0810	Sandal Making and Leather Construction
ART	0822	Creative Cartoons	MET	0810	Meteorology for Airman and Boatman
BCN	0800	Before You Build	MRC	0810	Motorcycle Rider Course/ Riding and Street Skills (MRC/RSS)
BCN	0805	Remodeling	MUS	0810	Singing For Pleasure
BCN	0810	House Building	MUS	0811	Piano Lab -- Beginning
BIO	0810	Genealogy -- Discovering Your Family Heritage	MUS	0812	Beginning Guitar
BUN	0810	TV Communications	MUS	0813	Community Jazz Lab
CCL	0810	Introduction to Numismatics	MUS	0814	Music Readiness I
CLP	0810	Myers-Briggs Type Indicators	MUS	0815	Music Readiness II
CLP	0820	Strong Campbell Interest Inventory	MUS	0816	Applied Music I
CLT	0111	Sewing for Selling	MUS	0817	Applied Music II
CLT	0113	Creative Needlecraft	MUS	0819	Applied Music III
CLT	0315	Basic Sewing	MUS	0820	Musicianship Class
CLT	0316	Advanced Sewing	MUS	0821	Group Music Instruction
CLT	0811	Beginning Crewel Stitchery	MUS	0822	Music Seminar
CLT	0813	Japanese Embroidery	OCE	0810	Secrets of the Sea
CLT	0816	Patchwork Quilting	ORH	0810	Raising Indoor Plants
CLT	0817	Rug Hooking	ORH	0811	Home Landscape: Design
CLT	0818	Rug and Wall Hangings	ORH	0812	Ornamental Horticulture
CLT	0819	Weaving	PEA	0810	Modern Jazz Dance I
CLT	0821	Creative Wardrobe Planning	PEA	0811	Modern Jazz Dance II
CLT	0823	Creations in Fabrication	PEA	0812	Hawaiian Dance
CMP	0511	Boutique Sewing	PEA	0813	Ballet
CSE	0810	How to Buy and Sell Your House	PEA	0814	Ballroom Dancing
CSE	0811	How to Reduce Costs Around the Home	PEA	0815	Square Dancing
CSE	0812	How to Win Contests	PEA	0817	Judo
CSE	0813	Interviewing: Basic Techniques	PEA	0818	Beginning Swimming
CSE	0814	Memory and Concentration	PEA	0819	Competitive Swimming I
CSE	0816	Know Your Car	PEA	0820	Competitive Swimming II
DRA	0810	Acting for Fun and Self Expression	PEA	0821	Slimnastics
DRA	0811	Art of the Amateur Magician	PEA	0822	Exercise and Competitive Play
DRA	0812	Introduction to Theatre for Children	PEA	0823	Gymnastics I
ENG	0811	Letter Writing	PEA	0824	Gymnastics II
ENR	0810	Motorcycle Care and Repair	PEA	0826	Understanding Football
ENR	0815	How To Service Your Small Engines	PEA	0827	Bowling
FMT	0810	Modeling I	PEA	0828	Soccer
FMT	0811	Modeling II	PEA	0829	Volleyball
FON	0001	Food for You	PEA	0830	Belly Dancing
FON	0005	Health and Weight Control	PEA	0831	Modern Dance
FON	0101	Gourmet Foods	PEA	0832	Karate for Beginners
FON	0103	Microwave Cooking	PEA	0833	Swimming and Lifesaving
FON	0105	Elegant Entertaining	PEA	0834	Tennis
FON	0810	Adventures in Dining	PEA	0835	Fundamentals of Dance
FON	0811	Oenology: The Study of Wines	PEA	0840	Aerobic Dance
FON	0812	Eat Smart	PED	0810	Introduction to Bridge
FSM	0310	Cake Decorating	PEL	0810	Sports Officiating
GRA	0810	Graphoanalysis (Handwriting Analysis)	PEL	0811	Tournament Chess
GRA	0811	Calligraphy	PHI	0810	Get Control of Your Time and Life
HEF	0003	Flower Arranging	PHI	0811	Meditation
HEF	0810	Upholstery	PHI	0813	Astrology
HEN	0810	Yoga	PHI	0814	Transcendental Meditation
HOM	0002	Clothing Selection	PHI	0815	Zen Buddhism
HRT	0810	Basic Home Building	PHI	0816	Zestful Living
HUM	0810	Travel: Mostly Europe	PHI	0818	Reincarnation
HUM	0811	Introduction to Antiques			
JEW	0810	Jewelry Crafting			

PSY	0815	Psychology of Emotions
PSY	0816	Search For Self
PSY	0820	Introduction to Hypnosis
PSY	0821	Parapsychology I
PSY	0822	Parapsychology II
PTY	0810	Field Experience in Photography
PTY	0811	Photography I
PTY	0812	Photography II
PTY	0813	Photo Printing Black and White I
PTY	0814	Photo Printing Black and White II
REC	0810	Enjoying Florida Fishing Through Success
REL	0810	Women in Religion
SEM	0800	Avocational and Recreational Seminar/Workshop
SPE	0810	How to Speak Successfully Before a Group

