

Course Descriptions

Florida Statewide Course Numbering System

Courses in this catalog are identified by prefixes and numbers that have been assigned in accordance with Florida's Statewide Course Numbering System. This common numbering system is used by all degree-granting public and participating private postsecondary institutions in Florida. The major purpose of this system is to facilitate the transfer of courses among participating institutions.

Each participating institution controls the title, credit, and content of its own courses and assigns the first digit of the course number to indicate the level at which students normally take the course. The course prefix is a three-letter designator for a subject matter area and is determined by the content of the course. Course prefixes and the last three digits of the course numbers are assigned by members of faculty discipline committees appointed for that purpose by the Florida Department of Education.

Exceptions to the General Rule for Equivalency

The following courses are exceptions to the general rule for course equivalencies and may not be transferable. Transferability is at the discretion of the receiving institution.

- A. Courses with 900-999 as the last three digits in the course number
- B. Internships, selected topics courses, clinical experiences, and study abroad courses
- C. Performance or studio courses in Art, Dance, Music and Theater
- D. Physical Education activity courses
- E. Skills courses in Criminal Justice
- F. Graduate courses

College-preparatory and vocational-preparatory courses may not be used to meet degree requirements and are not transferable.



Headings and Prefixes

The headings given below are used to group courses in this Catalog and in the Schedule of Credit Classes distributed prior to registration each session. The listing of prefixes indicates the prefixes of courses to be found under a particular heading.

HEADINGS	PREFIXES
Accounting	ACG, APA
Anthropology	ANT
Art	ARH, ART
Astronomy	AST
Banking	BAN
Biology	BOT, BSC, MCB, OCB, PCB, ZOO
Building Construction Technology	BCN, BCT, ETC, ETM, TAR
Business Administration and Management	BUL, GEB, MAN, MAR, MKA, MNA, MTB, SBM, TAX
Career Development	SLS
Chemistry	CHM
Computer Engineering Technology (Networking)	See Electronics Engineering Technology
Computer Information Technology, Computer Programming and Analysis, and Database Technology	CGS, CIS, COP
Criminal Justice Institute	CJD
Criminal Justice Technology	CCJ, CJT
Culinary Management	FOS, FSS, HUN, OST
Dance	DAA
Database Technology	See Computer Information Technology
Dental Hygiene	DEH, DES
Digital Media Technology	GRA
Drafting and Design Technology	CAP, ETD, MTB
Economics	ECO
Education	ARE, EDF, EDG, EEC, EEX, EME
Electronics Engineering Technology, Computer Engineering Technology (Networking), and Microelectronics	
Manufacturing Technology	CET, EET, EST, ETD, MTB
Emergency Medical Services (EMT/Paramedic)	EMS
Engineering	EGN, EGS
English	AML, CRW, ENC, ENG, ENL, LIT
English as a Second Language for Academic Purposes	EAP
Environmental Science Technology	EVS
Film	FIL
Finance	BRC, FIN
Fire Science Technology	FFP
French	FRE
Geography	GEA
Geology	GLY
German	GER
Gerontology	GEY
Graphics Technology	GRA
Health, Health and Fitness, and Physical Education	HLP, HSC, PEL, PEM, PEN, PEO, PET

Health-Related	HSC, PHY
High-Tech Training for Individuals with Disabilities	CGS, CIS, ENC, ETD, GEB, MTB, OCA, OTA
History	AMH, EUH, HIS
Horticulture Technology	AOM, BOT, ENY, FRC, HOS, IPM, ORH, PLP, PLS, PMA, SOS, VEC
Hospitality and Tourism	FSS, HFT
Humanities	HUM
Interdisciplinary Studies	IDH
Journalism	JOU, MMC
Library Science	LIS
Logic	PHI
Mathematics	MAC, MAE, MAP, MAS, MAT, MGF, MHE, MTB, STA
Meteorology	MET
Microelectronics	
Manufacturing Technology	See Electronics Engineering Technology
Military Science	MIS
Music	MUL, MUM, MUN, MUS, MUT, MVK, MVS, MVV
Nursing	NUR
Nutrition	HUN
Oceanography	OCE
Office Systems Technology	OST
Paralegal Studies	PLA
Philosophy	PHI
Photography	PGY
Physical Science	PSC
Physics	PHY
Political Science	INR, POS
Portuguese	POR
Postal Service Management	MNA
Psychology	CLP, DEP, EDP, INP, PSY, SOP
Radiography	RTE
Reading	REA
Real Estate	REE
Religion	REL
Respiratory Care	RET
Sign Language	SPA
Social Science	AFA
Sociology	SYG
Sonography	SON
Spanish	SPN
Speech	ORI, SPC
Student Development	SLS
Student Success	SLS
Surveying Technology	SUR
Television	RTV
Theater	THE, TPA, TPP

The following is a guide to the abbreviations at the top of the pages with course descriptions. There may be exceptions to these guidelines.

College-Level and College-Preparatory Credits:

Cr	Credits per session
Cls	Class time per week
Lab	Lab time per week

Vocational Credits:

Con	Contact hours per course
Voc	Vocational credits per course

All students are subject to course prerequisites, some of which require minimum entry assessment scores.

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Accounting							
ACG 2021	3	3	0	APA 1111	3	3	0
PRINCIPLES OF FINANCIAL ACCOUNTING				BASIC ACCOUNTING			
Accounting concepts, principles, procedures and underlying theories applicable to nature of accounting, financial statements, accounting cycle, current assets, plant and equipment, long-term investments, intangible assets, payroll, current liabilities, long-term debt, and owner's equity including accounting for sole proprietorships, partnerships, and corporations.				Instruction and practice in fundamentals of financial record keeping and reporting for professionals, service and merchandising enterprises.			
ACG 2071	3	3	0	APA 2934	1 - 3	variable	
PRINCIPLES OF MANAGERIAL ACCOUNTING				SELECTED TOPICS IN ACCOUNTING			
Prerequisite: ACG 2021. Accounting for business information requirements with cost accounting concepts and relationships, statement of cash flows, financial statement analysis, cost-volume-profit analysis, variance analysis, budgeting, pricing decisions, capital expenditure decisions, and management accounting analysis for decision-making.				For students interested in discussion, exploration and observation of special topics in accounting. May be repeated for credit, but grade forgiveness cannot be applied.			
ACG 2100	3	3	0	APA 2941	1 - 4	variable	
INTERMEDIATE ACCOUNTING I				INTERNSHIP EXPLORATION IN ACCOUNTING			
Prerequisite: ACG 2071. Overview of accounting and its theoretical foundation, including recognition, measurement, and reporting of income and assets.				Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including ACG 2021 and ACG 2071 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)			
ACG 2110	3	3	0	APA 2942	1 - 4	variable	
INTERMEDIATE ACCOUNTING II				INTERNSHIP IN ACCOUNTING			
Prerequisite: ACG 2100. Overview of accounting and its theoretical foundations, including recognition, measurement and reporting of liabilities and owner's equity, special problems in determination and reporting of income on financial statements.				Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including ACG 2021, ACG 2071, ACG 2450 and either ACG 2460 or CGS 2510 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)			
ACG 2360	3	3	0	Anthropology			
COST ACCOUNTING				ANT 2000	3	3	0
Prerequisite: ACG 2071. Accounting principles and procedures used in analysis and control of cost for manufacturing and service businesses. Topics include preparation of statements and schedules, analysis of costs, selling, general and administrative expenses, and variances.				INTRODUCTORY ANTHROPOLOGY			
ACG 2450	3	3	0	Introduction to study of man and culture with special attention to physical anthropology, archaeology and linguistics. Emphasis on social, political, religious and economic institutions in selected preliterate societies.			
COMPUTER ACCOUNTING I				ANT 2000H	3	3	0
Prerequisite: APA 1111 or ACG 2021. Introduction to use of computers to process and organize accounting information. Includes analysis of transactions, data entry, and preparation and analysis of computer-generated financial statements and reports.				INTRODUCTORY ANTHROPOLOGY - HONORS			
ACG 2460	3	3	0	Same as ANT 2000 with honors level content. Honors program permission required.			
COMPUTER ACCOUNTING II - SPREADSHEETS				ANT 2930	1 - 3	variable	
Prerequisite: ACG 2021 or APA 1111 or MTB 1103 or departmental approval. Introduction to use of spreadsheets in accounting. Students use spreadsheets to complete accounting cycle, prepare financial statements and reports, and perform financial analysis.				SELECTED TOPICS IN ANTHROPOLOGY			
				Prerequisite: Departmental approval. Selected topics in anthropology based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.			

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Art							
ARH 1009 THE VISUAL ARTS TODAY Introductory art appreciation course designed to provide student with foundation for understanding contemporary visual arts.	3	3	0	ART 1933 FUNDAMENTALS OF CREATIVE THINKING An introductory course designed to encourage creative thinking and problem solving for students across disciplines through group and individual activities. The course will include a study of characteristics of a creative mind, the creative process, creative problem solving, assessing and increasing growth of creative potential.	2	2	0
ARH 2050 INTRODUCTION TO ART HISTORY I Survey of development of visual art forms from prehistory through Middle Ages.	3	3	0	ART 2110C CERAMICS I Introductory course in pottery design: hand-building techniques, glazing and firing. (Special Fee: \$25.00)	3	3	3
ARH 2051 INTRODUCTION TO ART HISTORY II Prerequisite: ENC 1101 or ENC 1101H. Survey of development of visual arts from Renaissance to present. Gordon Rule course which requires 6,000 words of writing..	3	3	0	ART 2111C CERAMICS II Prerequisite: ART2110C. Continuation of ART 2110C with emphasis on wheel throwing, advanced glaze formulation, kiln loading and firing. (Special Fee: \$25.00)	3	3	3
ARH 2051H INTRODUCTION TO ART HISTORY II - HONORS Same as ARH 2051 with honors level content. Honors program permission required.	3	3	0	ART 2330C LIFE DRAWING Prerequisite: ART1301C or departmental approval. Working from live models, students learn to draw the human form. Includes instruction in skeletal structure, musculature, movement, and placement in space. (Special Fee: \$25.00)	3	2	4
ARH 2930 SELECTED TOPICS IN ART Selected topics in art based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable		ART 2400C PRINTMAKING I Basic mastery of graphic techniques of intaglio and/or relief printmaking. Consists of studio work, demonstrations of each technique to be mastered and selected studies of history of printmaking. (Special Fee: \$25.00)	3	3	3
ART 1201C DESIGN I Introduction to studio art through analytical use of elements and principles of two-dimensional design and color theory. (Special Fee: \$25.00)	3	3	3	ART 2401C PRINTMAKING II Prerequisite: ART 2400C or departmental approval. Consists of experimental approach to individual expression with emphasis on imagery, content and refinement of techniques of printmaking. (Special Fee: \$25.00)	3	3	3
ART 1203C DESIGN II Prerequisite: ART 1201C. Continuation of ART 1201C through study of visual elements and principles and their application in three-dimensional form and color theory. (Special Fee: \$25.00)	3	3	3	ART 2510C PAINTING I Prerequisites: ART 1201C and ART 1301C or departmental approval. Introduction to basic concepts and techniques of painting. Emphasis on color mixing, exploration of form and illusionistic space through observation. (Special Fee: \$25.00)	3	3	3
ART 1301C DRAWING I Introduction to basic skills, concepts, methods, and tools. Emphasis on increasing powers of visual observation and drawing from life. (Special Fee: \$25.00)	3	3	3	ART 2520C PAINTING II Prerequisite: ART 2510C. Painting basics are reviewed through continued exploration into technique, color and composition. Prepares student for more advanced painting through a series of more elaborate and long-term projects. (Special Fee: \$25.00)	3	3	3

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
ART 2701C SCULPTURE I Experiences with variety of three-dimensional media such as wood, metal (cast and fabricated), clay and plastics, designed to introduce student to handling of materials and tools necessary to understand arrangement and relationship of three-dimensional forms. (Special Fee: \$25.00)	3	3	3	BAN 1114 DEPOSIT OPERATIONS Deposit Operations covers U.S. payment systems, banking laws and regulations, and current industry practices. Bank deposit-taking activities, bank manage deposit funds, and the interbank EFT systems are examined. An American Institute of Banking course of employees of commercial banks.	2	2	0
ART 2800C SELECTED TOPICS IN ART Seminars for students interested in further study in specific art area.	1 - 6	variable		BAN 1161 CORPORATE SECURITIES SERVICES Provides a broad understanding of corporate securities processing and administration. It describes how a bank's corporate securities services department serves as an intermediary between corporations, states, municipalities, investors, and public authorities that issue securities. It also describes the features, benefits, and users of corporate securities products and services. An American Institute of Banking course for employees of commercial banks.	1	1	0
ART 2941 INTERNSHIP EXPLORATION IN ART AND FINE ARTS Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including one of the following Studio Art Classes (ART 1201C, ART 1301C, ART 2400C, ART 2510C, ART 2701C, ART 2110C) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		BAN 1405 TRUST OPERATIONS Presents concepts and ideas that comprise various trust functions and their translations into workable procedures. Focus on development of knowledge and attitudes required to perform various tasks within trust function. An American Institute of Banking course for employees of commercial banks.	3	3	0
Astronomy				BAN 1425 SELLING BANK SERVICES Provides bank-customer contact personnel with skills needed to sell bank services and meet customer needs. Cultivates positive attitude towards selling and develops specific selling techniques. An American Institute of Banking course for employees of commercial banks.	2	2	0
AST 1002 ASTRONOMY Introductory survey of astronomical universe. Includes study of the earth as astronomical body, solar systems, stars, galaxies and cosmological theories of universe in general. Much emphasis on unprecedented growth of knowledge in astronomy during past decade.	3	3	0	BAN 1800 LAW AND BANKING: PRINCIPLES Banker's guide to law and legal issues with special emphasis on Uniform Commercial Code. Summarizes law pertaining to contracts, real estate and bankruptcy and legal implications of consumer lending. An American Institute of Banking course for employees of commercial banks.	3	3	0
AST 1002H ASTRONOMY - HONORS Same as AST 1002 with honors content. Honors program permission required.	3	3	0	BAN 1801 LAW AND BANKING: APPLICATIONS Introduction to laws pertaining to secured transactions, letters of credit and bank collection process. Includes material on check losses and broad range of legal issues related to processing of checks. Also, collateral, perfection and default. Case histories used extensively. An American Institute of Banking course for employees of commercial banks.	2	2	0
AST 2930 SELECTED TOPICS IN ASTRONOMY Prerequisite: Departmental approval. Selected topics in astronomy based on the needs and areas of interest of the class and professor. May include planetarium and/or observing activities as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable		BAN 2210 ANALYZING FINANCIAL STATEMENTS Basic skills of financial statement analysis for prospective bank lender/credit analyst already familiar with fundamental accounting procedures and practices. An American Institute of Banking course for employees of commercial banks.	3	3	0
Banking							
BAN 1004 PRINCIPLES OF BANKING Principle aspects of banking, fundamentals of negotiable instruments, contemporary issues and developments within the industry are emphasized. American Institute of Banking course for employees of commercial banks.	3	3	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
BAN 2231 COMMERCIAL LENDING Conceptual framework for study of commercial lending. Emphasis on how commercial lending business is organized and how it focuses on bank profitability. Also, commercial lending process from application to collection. An American Institute of Banking course for employees of commercial banks.	3	3	0	Biology			
BAN 2240 CONSUMER LENDING Survey of credit risk evaluation, setting policy, handling loans from application through closing. Also servicing and collection, compliance methods, portfolio management and marketing. An American Institute of Banking course for employees of commercial banks.	3	3	0	BOT 2010C BOTANY Prerequisite: BSC 1010C or departmental approval. Study of structural organization, classification, physiology, reproduction, heredity and evolution of plants. Includes survey of plant kingdom and comparison of various plant groups. (Special Fee: \$25.00)	4	3	3
BAN 2501 MONEY AND BANKING FOR COMMERCIAL BANKERS Role of commercial banks and Federal Reserve Bank in monetary system of United States. How other financial institutions affect commercial banks and supply of money. An American Institute of Banking course for employees of commercial banks.	3	3	0	BOT 2932 SELECTED TOPICS IN BOTANY Prerequisite: Departmental approval. Selected topics in botany based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied	1 - 3	variable	
BAN 2511 MARKETING FOR BANKERS Motivation of customers to buy financial services, development of successful marketing plan, integration of public relations, advertising, sales promotion, selling and service distribution functions of bank. An American Institute of Banking course for employees of commercial banks.	3	3	0	BSC 1000L LAB IN APPLIED BIOLOGY Lab designed to supplement lectures in BSC 1005. Laboratory experiences provide students with science lab requirements that will satisfy the General Education Requirement for a lab science at many universities and may be taken concurrently with, or independently of, BSC 1005. (Special Fee: \$25.00)	1	0	3
BAN 2531 PREPARING FOR SUPERVISION Prepares student for supervisory role through case studies, role playing and discussion. An American Institute of Banking course for employees of commercial banks.	1	1	0	BSC 1005 BIOLOGICAL SCIENCE General education non-lab course for students not majoring in biology. Includes study of human body, human evolution, genetics, reproduction, development and diseases of man. Emphasis on human organism as central figure in biosphere. Not prerequisite for any other biology course.	3	3	0
BAN 2532 BANK SUPERVISION This course helps new or potential supervisors become better managers by emphasizing the broad perspectives and by combining fresh insights with the interpersonal relationship skills. An American Institute of Banking course for employees of commercial banks.	3	3	0	BSC 1010C FUNDAMENTALS OF BIOLOGY I Introduction to fundamental biological principles emphasizing common attributes of all living organisms. Unifying concepts include chemical structure of living matter, structure and function of the cell, specialized cells, major metabolic functions, control systems, reproduction, genetics, evolution and ecology. Prerequisite for advanced biology courses. (Special Fee: \$25.00)	4	3	3
BAN 2930 SELECTED TOPICS IN BANKING Reserved for presentation of special courses that may be required on essentially one-time basis; introduction of new courses that may be developed by American Institute of Banking and requiring immediate implementation prior to processing of formal change to curriculum. An American Institute of Banking course for employees of commercial banks. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		BSC 1010H FUNDAMENTALS OF BIOLOGY - HONORS Same as BSC 1010C with honors content. Honors program permission required. (Special Fee: \$25.00)	4	3	3
				BSC 1011C FUNDAMENTALS OF BIOLOGY II Prerequisite: BSC1010C or BSC 1010H. A continuation of BSC1010C. Includes an analysis of biological systems at the organismal and supraorganismal levels: Unity and diversity of life, organismal structure and function. Will examine such topics as: Darwinism, origin of life, diversity and origin of Eukaryotes, evolution and diversity of the five kingdoms; animal and plant morphology, reproduction, development of animal behavior, population biology and ecology. (Special Fee: \$25.00)	4	3	3

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
BSC 1011H FUNDAMENTALS OF BIOLOGY II - HONORS Same as BSC 1011C with honors content. Honors program permission required. (Special Fee: \$25.00)	4	3	3	MCB 2010C MICROBIOLOGY Prerequisite: Satisfactory completion of required college-preparatory reading course(s). This course is designed for Allied Health majors. Survey of microbial forms with emphasis on bacteria: morphology, physiology and genetic mechanisms. Pathogenic processes and microbes discussed in detail. (Special Fee: \$25.00)	4	3	3
BSC 1026 BIOLOGY OF HUMAN SEXUALITY General, non-lab course designed to introduce students to various biological aspects of human sexuality, including sexual genetics and sex determination, sexual anatomy, physiology and development, processes of fertilization, pregnancy, birth control, sexually transmitted diseases, menstruation, menopause and aging. Other appropriate areas may be discussed when time permits.	3	3	0	MCB 2930 SELECTED TOPICS IN MICROBIOLOGY Prerequisite: Departmental approval. Selected topics in microbiology based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
BSC 1050 ENVIRONMENTAL SCIENCE General education non-lab course provides understanding of man's interdependence with and responsibility for environment. Investigates such aspects of environment as pollution, urbanization, population trends and changes in lifestyles. Treats present and projected solutions to problems.	3	3	0	OCB 2003C MARINE BIOLOGY Prerequisite: BSC 1010C or departmental approval. Survey course with lecture and lab. Topics include ocean as environment (currents, tides, water chemistry, etc.); survey of marine animals and plants; and marine ecosystems. Field trips required. (Special Fee: \$25.00)	4	3	3
BSC 2093C HUMAN ANATOMY AND PHYSIOLOGY I Prerequisite: BSC 1010C or MCB 2010C or departmental approval. Tissues, structure and function of integumentary, skeletal, muscular, endocrine and nervous systems, and organs of special sense. Lab exercises emphasize anatomic and physiologic principles associated with classroom work. (Special Fee: \$25.00)	4	3	3	OCB 2930 SELECTED TOPICS IN MARINE BIOLOGY Prerequisite: Departmental approval. Selected topics in marine biology based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
BSC 2094C HUMAN ANATOMY AND PHYSIOLOGY II Prerequisite: Minimum grade of C in BSC2093C or departmental approval. Continuation of BSC2093C, including circulatory, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems with considerable emphasis on biochemistry of metabolic processes and body fluids. (Special Fee: \$25.00)	4	3	3	PCB 1440 FLORIDA ENVIRONMENTAL SYSTEMS Focuses on Florida ecology. Combination of lecture, lab, field and computer lab techniques used to study variety of habitats. Topics include energy flow through food chains, environmental modeling and general ecology. Prior exposure to general biology topics recommended. No prior experience required.	3	3	0
BSC 2933 SELECTED TOPICS IN BIOLOGY Prerequisite: Departmental approval. Selected topics in biological sciences based on historical, traditional or contemporary approach as background and interest of students and professor dictate. May be repeated for credit, but grade forgiveness cannot be applied.	1-3	1-9		PCB 1440H FLORIDA ENVIRONMENTAL SYSTEMS-HONORS Same as PCB 1440 with honors content. Honors program permission required.	3	3	0
BSC 2941 Internship Exploration in Biology Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including BSC 1010 C or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		PCB 2303C AQUATIC BIOLOGY Prerequisite: BSC 1010C or departmental approval. Lecture, lab and field biological survey of lakes and streams including taxonomy, ecology and life cycles of freshwater organisms with emphasis on invertebrates. Covers physical and chemical factors of freshwater ecosystems, such as origin of lakes, evolution of streams and biogeochemical cycles of freshwater. Biology of polluted water discussed. (Special Fee: \$25.00)	3	2	3

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
PCB 2304 NATURAL HISTORY OF FLORIDA RIVERS Field ecology course. Topics include plants, animals, water chemistry, stream flow dynamics, fresh water resources and management and pollution. All-day field trip required.	1	0	3	Building Construction Technology			
PCB 2313 NATURAL HISTORY OF FLORIDA MANATEES Field ecology course. Topics include manatee anatomy, physiology and behavior as well as discussion of reasons for population decline. Winter habitat (warm water refuge) explored by boat and snorkel. All-day field trip required.	1	0	3	BCN 1200C BUILDING MATERIALS AND CONSTRUCTION METHODS Survey of materials and methods used in construction. Covers broad areas of wood, concrete, masonry, metal and other building materials. Students select various topics for class presentation. Variety of audio visual material enhances student understanding of topics. (Special Fee: \$25.00)	4	4	0
PCB 2930 SELECTED TOPICS IN ECOLOGY Prerequisite: Departmental approval. Selected topics in ecology based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1-3	variable		BCN 1272 CONSTRUCTION BLUEPRINT READING Study of various types of drawings and documents used in construction industry. Includes such topics as terminology, abbreviations, symbols, notations, scales and dimensions, meaning of lines, drawing history, technical and orthographic projection, types of construction and trade information.	3	3	0
ZOO 2010C GENERAL ZOOLOGY Prerequisite: BSC 1010C or departmental approval. Lecture and lab study of animals from simple to complex. Emphasis on taxonomy, structure, function, evolution and development of biological skills needed for advanced biology courses. (Special Fee: \$25.00)	4	3	3	BCN 1721 CONSTRUCTION PLANNING AND CONTROL Survey of important points to be considered in construction project. Covers development of CPM (Critical Path Method) plan with emphasis on construction activities, time durations, scheduling, sequence of operations, follow-up methods, project control and integration of calendar dates to plan. (Special Fee: \$25.00)	4	4	0
ZOO 2010H GENERAL ZOOLOGY - HONORS Same as ZOO 2010C with honors content. Honors program permission required. (Special Fee: \$25.00)	4	3	3	BCN 2405 STATICS AND STRENGTH OF MATERIALS Prerequisite: MTB 2321 or MAC 1114 or higher math or departmental approval. Covers principles of statics, structural mechanics and effects of loads and loading on building elements and frames. Some major areas include materials, stress and deformation, properties of sections, gravity loads, shear and bending in beams, and stresses in columns.	4	4	0
ZOO 2511 BEHAVIOR OF WILD HORSES General education non-lab course designed to introduce students to the study of animal behavior by examining the maintenance behaviors such as feeding, resting, and autogrooming and comparing them to activities shown by other equids like zebras. Students also will study the ecology and management of the horses and the structure and function of social behavior like allogrooming, courtship and mating, dispersal of the young, parturition and nursing, as well as the behavioral development of foals. Students will learn to analyze data and develop explanations to explain the data using information from original journal articles.	3	3	0	BCN 2563 BUILDING SERVICE SYSTEMS Survey of design and installation of various mechanical and electrical systems used in buildings. Covers heat loss and heat gain, comfort control, water systems, system installation and coordination, illumination and other selected topics.	3	3	0
ZOO 2930 SELECTED TOPICS IN ZOOLOGY Prerequisite: Departmental approval. Selected topics in zoology based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1-3	variable		BCN 2930 SELECTED TOPICS IN BUILDING CONSTRUCTION Prerequisite: Departmental approval. Provides exposure to various technical and non-technical disciplines in which students are likely to become involved upon entry into the building construction environment. May be repeated for additional credit, but grade forgiveness cannot be applied.	1-6	variable	
				BCN 2941 INTERNSHIP EXPLORATION IN CONSTRUCTION Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including ETM 1822 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1-4	variable	

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
BCN 2942 INTERNSHIP IN BUILDING CONSTRUCTION Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including BCN 1272, ETM 1822 and TAR 1120C or departmental approval. This course provides a planned work-based experience that will provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		TAR 2033C ARCHITECTURAL DESIGN Prerequisite: TAR 1120C. Introduction to architectural planning and design. Use of project team concept. Student projects include shopping centers, industrial complexes, production facilities, apartment complexes, high-rise buildings, etc. Students prepare necessary drawings to construct project, including site plan, building plans, sections, etc. Students also build model of their project. (Special Fee: \$25.00)	3	2	2
BCT 1705 CONTRACTS, CODES, SPECIFICATIONS AND OFFICE PRACTICES Covers organization and operation of architect's, engineer's or contractor's office and includes study of office practices, codes, standards, specifications and legal documents related to construction industry.	3	3	0	Business Administration and Management			
BCT 2600 BUILDING CONSTRUCTION ESTIMATING Basic steps of estimating from review of drawings and specifications to development of final estimate including overhead and profit factors. Prepares students to make some estimates commonly used in construction industry. (Special Fee: \$25.00)	4	4	0	BUL 2241 BUSINESS LAW I Introduction to law, its social forces and agencies for enforcement; effects of governmental regulation on business and society, including environmental law, community planning and consumer protection; contracts; personal property, including bailments and sales.	3	3	0
ETC 2220 SOILS AND FOUNDATIONS Analysis of subsoil conditions, bearing capacity and settlement analysis, character of natural soil deposit, earth pressure and retaining wall theory and stability of slopes and sub-grades. Also covers foundation design, behavioral characteristics and pile driving. (Special Fee: \$25.00)	3	3	0	BUL 2242 BUSINESS LAW II Prerequisite: BUL 2241. Continuation of study of law, including commercial paper, creditors' rights under secured transactions, insurance, bankruptcy, agency, employment, partnerships, corporations and real property.	3	3	0
ETC 2521 HYDRAULICS AND HYDROLOGY A study in basic theory and design of hydrology related to drainage areas, storm water runoff and stream-flow analysis. This course also includes a study in basic theory and design of hydraulics of flow in pipes and in open channels. Design concepts, techniques, and illustrations of hydrology and hydraulics will be utilized.	4	4	0	GEB 1011 INTRODUCTION TO BUSINESS Fundamentals of business organization and procedures to acquaint student with management, business terminology, organization and control of large and small business.	3	3	0
ETM 1822 ENGINEERING MATERIALS AND PROCESSES Survey of basic materials used in industry, metallic and non-metallic, and processes used to form, fabricate and finish these materials. Survey of materials and methods used in construction. Covers broad areas of wood, concrete, masonry, metal and other building materials. Students select various topics for class presentation. Variety of audio visual material enhances student understanding of topics. (Special Fee: \$25.00)	4	4	0	GEB 1350 INTRODUCTION TO INTERNATIONAL BUSINESS Study of international marketing and distribution principles and practices for import-export, tourism, banking and other industries involved in international business. Includes areas of import-export documentation, transportation, pricing, trade shows and other skills necessary in international marketing and distribution.	3	3	0
TAR 1120C ARCHITECTURAL DRAWING I Prerequisite: Minimum of one unit of high school drafting or equivalent work experience in drafting or ETD 1100C. Covers residential design and wood frame construction with additional study in aspects of housing, aesthetics and working drawings. Students prepare assigned drawings. (Special Fee: \$25.00)	4	3	2	GEB 2430 ETHICAL AND LEGAL BUSINESS ISSUES Various ethical and legal issues in the contemporary business environment will be presented. Topics include whistle blowing, workplace drug testing, insider trading, trade secrets, workplace safety, sexual harassment, affirmative action, industrial hazards, bribes/payoffs, and advertising.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
GEB 2941 INTERNSHIP EXPLORATION IN BUSINESS Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including GEB 1011 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		MAR 2011 PRINCIPLES OF MARKETING Prerequisite: GEB 1011. Functions, institutions, methods and problems of marketing goods and services.	3	3	0
MAN 1800 SMALL BUSINESS MANAGEMENT Basic principles needed for success in small business. Includes procedures for planning, locating, opening, operating, evaluating and controlling small business. Presents basic foundations of budgeting, marketing, research, promotion, profit analysis and advertising.	3	3	0	MAR 2141 INTERNATIONAL MARKETING The fundamentals of international marketing is to acquaint the student with the concepts, terms and ideas of exporting, developing and/or manufacturing a product, for resale, in a foreign country.	1	1	0
MAN 2021 PRINCIPLES OF MANAGEMENT Prerequisite: GEB 1011. Principles encompassed in managerial functions of application to operation of business enterprise.	3	3	0	MAR 2941 INTERNSHIP EXPLORATION IN BUSINESS (MARKETING) Prerequisite: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including GEB 1011 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
MAN 2300 INTRODUCTION TO HUMAN RESOURCES MANAGEMENT This course is an overview of the field of Human Resources Management. Emphasis is on providing a basic understanding of the business concepts utilized in the Human Resources Management area.	3	3	0	MAR 2942 INTERNSHIP IN BUSINESS (MARKETING) Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including MAR 2011, GEB 1011 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
MAN 2934 SELECTED TOPICS IN BUSINESS For students interested in discussion, exploration and observation of special topics in business. May be repeated for credit, grade forgiveness cannot be applied.	1 - 3	variable		MKA 1930 BUSINESS OPPORTUNITIES IN THE FORMER SOVIET UNION The main idea of this course is to explain student business opportunities in the former Soviet Union's new, huge and emerging market.	1	1	0
MAN 2941 INTERNSHIP EXPLORATION IN BUSINESS (MANAGEMENT) Prerequisite: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including GEB 1011 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		MKA 2021 PRINCIPLES OF SELLING Prerequisite: GEB 1011 or experience. Combination of principles and techniques of selling. Emphasis on person-to-person situations, consumer motivations, persuasion and problems dealing with psychology of sales situations.	3	3	0
MAN 2942 INTERNSHIP IN BUSINESS (MANAGEMENT) Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including MAN 2021, GEB 1011 or departmental approval. This course provides a planned work-based experience that will provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		MKA 2511 ADVERTISING Prerequisite: GEB 1011 or experience. Study of modern advertising from marketing, communications, consumer and legal viewpoints. Emphasis on media selection, sales promotion and creative development of advertising.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
MNA 2320 HUMAN RESOURCES RECRUITMENT, SELECTION AND STAFFING Prerequisite: MAN 2300. This course examines how the functions of recruitment, selection and staffing/training fit into a Human Resources Department. Students will practice analyzing position, recruiting qualified applicants, interviewing candidates for employment and, once hired, orient and train them.	3	3	0	TAX 2000 FEDERAL INCOME TAX Prerequisite: ACG 2021. Fundamental regulations covering federal income tax applicable to individuals. Includes computation of tax, preparation of forms and tax planning.	3	3	0
MNA 2325 COMPENSATION AND BENEFITS SYSTEMS Prerequisite: MAN 2300. This course discusses various compensation and benefits plans, legal issues, and the administration of compensation and benefits plans. Emphasis is on providing a basic understanding of the business concepts utilized in the compensation and benefits area.	3	3	0	SLS 1301 CAREER DEVELOPMENT Student develops a personal profile of skills, interests, and values in the process of clarifying career and educational goals. The course activities include self-assessment, exploring occupational options, and developing job search techniques. A model for making career decisions is also included. (Special fee \$25.00)	3	3	0
MNA 2329 CASE STUDIES IN HUMAN RESOURCES MANAGEMENT Prerequisites: MAN 2300, MNA 2320, MNA 2325, and MNA 2403. This course uses a case study, experiential/simulated learning approach to build upon and apply Human Resources Management concepts. Students will develop and apply their communication and employee relations skills and problem-solving and decision-making abilities to cases that reflect work-related, human resources challenges.	3	3	0	SLS 1303 JOB SEARCH A course in which the student learns how to best prepare for seeking employment in their chosen profession. Students will prepare a personal resume and interview request letter, develop a list of potential employers and learn interview strategies. The course will be a combination of lecture, audio/visual aids and class interactions.	1	1	0
MNA 2403 HUMAN RESOURCES MANAGEMENT LAW AND EMPLOYEE RELATIONS Prerequisites: BUL 2241 and MAN 2300. This course is a study of law as it applies to the management of human resources. Particular emphasis is placed on the impact of legal issues, laws, and organization policies on the employee-employer relationship.	3	3	0	SLS 2930 SELECTED TOPICS IN CAREER AND LIFE PLANNING Student develops and explores in depth stated personal objectives and goals as related to potential career areas and life planning. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
MTB 1103 BUSINESS MATHEMATICS Practical application of mathematics to computational problems of business and consumerism. Business applications include decimals, fractions, percentages, interest rates, bank records, payroll and merchandising.	3	3	0	Chemistry			
SBM 1101 STARTING AND MANAGING A SMALL BUSINESS The fundamentals of starting and managing a business are explored. The student will become acquainted with the unique characteristics of marketing, management, and accounting as it relates to the entrepreneurial experience.	1	1	0	CHM 1020 CHEMISTRY IN EVERYDAY LIFE Meets general education requirement for non-science major. Study of some basic concepts in inorganic chemistry, organic chemistry and biochemistry. Students apply principles as they analyze, discuss and make decisions on chemically related problems that affect everyday life. (Not prerequisite for any other science course.)	3	3	0
SBM 1146 SMALL BUSINESS MARKETING Marketing principles and practices as applied to the successful operation of a small business.	1	1	0	CHM 1025C INTRODUCTION TO GENERAL CHEMISTRY Prerequisite: One year of high school algebra or minimum grade of C in MAT 0020C or MAT 0024C or appropriate score on an approved assessment. Prepares students without high school chemistry or with inadequate background for CHM 1045C. Modern chemical theories used to develop understanding of fundamentals of inorganic chemistry and its applications. Emphasis on quantitative relationships, using dimensional analysis to solve problems. Laboratory experiences are integral part of course. May not be taken for credit subsequent to earning C or better in CHM 1045C. (Special Fee: \$25.00)	4	3	3
SBM 1164 INTERNATIONAL LAW The fundamentals of international law acquaints the student with a total understanding of the activities involved in international business and how these activities are organized and executed.	1	1	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
CHM 1045C GENERAL CHEMISTRY WITH QUALITATIVE ANALYSIS I Prerequisite: CHM 1025C or one year of high school chemistry with a minimum grade of C; and MAC 1102 or MAC 1105 or two years of high school algebra or an appropriate score on an approved mathematics assessment. A study of the basic principles of chemistry including chemical reactivity, atomic structure, chemical bonding, molecular geometry, periodicity, stoichiometry, and kinetic-molecular treatment of gases. Laboratory illustrates principles discussed in classroom. (Special Fee: \$25.00)	4	3	3	CHM 2211C ORGANIC CHEMISTRY II Prerequisite: Minimum grade of C in CHM 2210C. Continuation of CHM 2210C with laboratory devoted to multistep synthesis. (Special Fee: \$25.00)	4	3	3
CHM1045H GENERAL CHEMISTRY WITH QUALITATIVE ANALYSIS I - HONORS Same as CHM 1045C with honors content. Honors program permission required. (Special Fee: \$25.00)	4	3	3	CHM 2933 SPECIAL TOPICS IN CHEMISTRY Prerequisites: CHM 1045C and departmental approval. For honor students in chemistry who wish to pursue certain topics in detail in chemistry as chosen by class; to research topics; to present information and lead discussion with other students and faculty members. Lecture/laboratory instruction. May be repeated for maximum of three hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
CHM 1046C GENERAL CHEMISTRY WITH QUALITATIVE ANALYSIS II Prerequisite: CHM 1045C with C or better. Continuation of CHM 1045C dealing mainly with equilibrium theory, thermodynamics, chemical kinetics and electrochemistry. Laboratory illustrates principles of ionic equilibria within framework of qualitative analysis. (Special Fee: \$25.00)	4	3	3	CHM 2941 INTERNSHIP EXPLORATION IN CHEMISTRY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including CHM 1025C or CHM 1045C or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
CHM 1046H GENERAL CHEMISTRY WITH QUALITATIVE ANALYSIS II - HONORS Same as CHM 1046C with honors content. Honors program permission required. (Special Fee: \$25.00)	4	3	3				
CHM 1205C INTRODUCTORY ORGANIC AND BIOCHEMISTRY Prerequisites: CHM 1025C (or one year of high school chemistry with a minimum grade of C) and MAT 0020C or MAT 0024C with a minimum grade of C or an appropriate score on an approved assessment. Introduces students planning careers in health-related fields or in life sciences to organic and biochemistry. Study of structures and typical reactions of functional groups, structures and functions of classes of biomolecules and energy flows of biological systems. Laboratory portion of course provides students with exercises illustrating principles of organic and biochemistry. Investigates many aspects about computers, such as principles, methods and applications along with impact and role of computers in society. (Special Fee: \$25.00)	4	3	3				
CHM 2210C ORGANIC CHEMISTRY I Prerequisite: CHM 1046C or comparable college-level general chemistry course. Deals with aliphatic and aromatic compounds, their properties, reactions and synthesis, emphasizing dependence of properties and reaction mechanisms upon structure. Laboratory illustrates techniques of separation, identification and purification. (Special Fee: \$25.00)	4	3	3				
				Computer Engineering Technology (Networking) See Electronics Engineering Technology for course descriptions.			
				Computer Information Technology, Computer Programming and Analysis, and Database Technology			
				CGS 1061 INTRODUCTION TO MICROCOMPUTERS Introduction to major uses of microcomputers for business applications. Topics covered include computer literacy and the use of industry-standard software packages for word processing, spreadsheets, database, and presentation graphics. (Special Fee: \$25.00)	3	3	0
				CGS 2060 COMPUTERS FOR EVERYONE Provides broad overview and understanding of computers. Investigates many aspects about computers, such as principles, methods and applications along with impact and role of computers in society.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
CGS 2100 MICROCOMPUTER FUNDAMENTALS AND APPLICATIONS This course covers the fundamentals of computers and computer nomenclature, particularly with respect to personal computer hardware and software used in today's business environment. Students will survey and use business applications programs utilizing pre-written programs that include word processing, spreadsheets, databases, presentation graphics, and web browsers. Students completing the course will have a solid understanding of computer concepts, how to use computers in today's business world, and how to access information on the World Wide Web. (Special Fee: \$25.00)	3	1.5	1.5	CIS XXXX INTRODUCTION TO E-COMMERCE Prerequisite: Minimum grade of C in COP 2822. This course is designed to provide individuals with an introduction to the world of electronic commerce, including both technical and business topics. Students will learn to evaluate and use software designed to create e-Commerce sites and to analyze the issues concerning electronic business activities. (Special Fee: \$25.00)	3	3	0
CGS 2510 SPREADSHEET APPLICATIONS Students learn how to solve realistic business problems using current computer spreadsheet software. How to create, modify, and print worksheets; when to apply various commands, formulas, and functions; how to create graphics and incorporate them into the worksheet; how to create a data table, and how to use a database.	3	3	0	CIS XXXX INTRODUCTION TO NETWORK SECURITY This course is designed for students who wish to develop their skills and understanding of network security. The course introduces students to methods used in securing data, protecting e-mail environments, and protecting privacy. Students will learn to use anti-virus software, encryptions and firewall technology. Students will understand security issues on various operating systems and required specifications for securing and managing information, hardware and software in network systems. (Special Fee: \$25.00)	3	3	0
CIS XXXX APPLICATION SOFTWARE TROUBLESHOOTING Prerequisite: Minimum grade of C in CGS 2100 or departmental approval. This course is designed to familiarize students with advanced office application features and to prepare students to offer technical support based on this knowledge. Students will learn to use advanced application software to integrate programs and applications common in a business environment and to effectively configure and troubleshoot applications. (Special Fee: \$25.00)	3	3	0	CIS XXXX INTRODUCTION TO OPERATING SYSTEMS This course covers an introduction to operating systems concepts and basic commands in various common operating systems. Students completing the course will have a solid understanding of operating system concepts and will know how to perform basic operations in several operating systems on desktop, networked, and mainframe systems. Students will be exposed to current versions of MS-DOS, Mac OS, Windows, and UNIX/Linux. (Special Fee: \$25.00)	3	3	0
CIS XXXX HELP DESK TOOLS AND TECHNOLOGIES Prerequisite: Minimum grade of C in CIS XXXX Introduction to Customer Service and Help Desk Concepts or departmental approval. This course is designed to provide individuals considering career opportunities in a technical support group with a better understanding of some of the available technology in a support environment and to provide hands-on experience with some of the technologies and tools found in many support groups. (Special Fee: \$25.00)	3	3	0	CIS 2321 DATA SYSTEMS ANALYSIS AND DESIGN Covers analysis and design of business data processing systems. Also covers phases of System Development Life Cycle (SDLC) and introduces various data and processing modeling tools and techniques.	3	3	0
CIS XXXX INTRODUCTION TO CUSTOMER SERVICE AND HELP DESK CONCEPTS This course is designed to provide individuals interested in a technical customer support career with the knowledge and skills to be successful in that field. This course will introduce the business, technical, and interpersonal skills needed to provide customer support. Students will gain a better understanding of the various careers in the customer support industry and the knowledge and skill sets needed to enter and advance in those careers. (Special Fee: \$25.00)	3	3	0	CIS 2930 SELECTED TOPICS IN INFORMATION SYSTEMS Seminar for students interested in discussion, exploration and observation of select topics in Information Systems. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
				CIS 2941 INTERNSHIP EXPLORATION IN COMPUTER PROGRAMMING Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including (knowledge of at least one computer language or database management system) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
CIS 2942 INTERNSHIP IN COMPUTER PROGRAMMING Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including: (1) one computer language or database management system course with an average of at least 3.0 in all COP courses; or (2) one advanced computer language or one advanced database management system course; or (3) departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		COP XXXX ORACLE DEVELOP PL/SQL Prerequisite: Minimum grade of C in COP 2740 or departmental approval. This course enables students to learn how to write PL/SQL procedures, functions, and packages. Working in both the Procedure Builder and the SQL* Plus environments, participants will learn how to create and manage PL/SQL program units and database triggers. Students also will learn how to use some of the Oracle-supplied packages. (Special Fee: \$25.00)	3	3	0
CIS 2943 INTERNSHIP IN COMPUTER INFORMATION TECHNOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including CET 2252C and COP 2822. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		COP XXXX ORACLE FORMS BUILDER I Prerequisite: Minimum grade of C in COP XXXX Oracle Develop PL/SQL or departmental approval. This course enables students to learn how to build and test interactive applications and to work in a graphical user interface (GUI) environment. Students also will learn how to customize forms with user input items such as check boxes, list items and radio groups and will learn how to modify data access by creating event-related triggers. (Special Fee: \$25.00)	3	3	0
CIS 2944 INTERNSHIP IN DATABASE TECHNOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including COP 2740. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		COP XXXX ORACLE FORMS BUILDER II Prerequisite: Minimum grade of C in COP XXXX Oracle Forms Builder I or departmental approval. This course enables students to broaden their Developer/2000 form-building skills. Students will use Project Builder to manage application files and multiple transactions across modules. Students also will learn how to create multiple-form applications and will practice enhancing their applications with custom menus, reports, and charts. (Special Fee: \$25.00)	3	3	0
COP XXXX ORACLE BACKUP AND RECOVERY Prerequisite: Minimum grade of C in COP 2741 or departmental approval. This course introduces students to the critical task of planning and implementing database backup and recovery strategies. The course addresses backup and recovery techniques and examines various backup, failure, restoration, and recovery scenarios. In hands-on exercises, students examine backup methodologies based on business requirements in a mission critical enterprise. Students utilize multiple strategies and Oracle tools such as Recovery Manager to perform backups, restore and recovery operations. This course includes interactive workshops that provide students with the opportunity to walk through numerous "real-world" backup, restore and recovery case studies. Students have the opportunity to apply some of the more advanced techniques within a workshop environment. In addition to lecture and hands-on learning, this course addresses answers to frequently asked questions concerning backup and recovery received by Oracle Worldwide Support. (Special Fee: \$25.00)	3	3	0	COP XXXX ORACLE NETWORK ADMINISTRATION Prerequisite: Minimum grade of C in COP XXXX Oracle Backup and Recovery or departmental approval. This Oracle8i Networking class will enable students to identify networking business trends and problems. Oracle's networking solutions to the business problems and trends will be presented. Students will learn about Net8 components and will learn how to configure both a simple and more complex Net8 environment. Potential networking security risks and Oracle's optional security solutions to these issues will be presented. Net8 debugging tools and interpretation of debugging information will be covered. Most common errors and ways to troubleshoot an Oracle networking environment will be covered. (Special Fee: \$25.00)	2	2	0

Course	Con	Voc	Course	Con	Voc		
COP XXXX ORACLE PERFORMANCE TUNING Prerequisite: Minimum grade of C in COP XXXX Oracle Backup and Recovery or departmental approval. This course will introduce students to a series of tuning steps which can be used to improve the performance of the Oracle8i Server. The focus is on the database rather than specific operating system performance issues. Students will gain practical experience tuning an Oracle database. Using a variety of tools, students also will learn how to recognize, troubleshoot and resolve common performance-related problems in administering an Oracle database. The course includes interactive workshops that provide students with the opportunity to walk through "real-world" performance tuning scenarios including problem diagnosis and performance enhancement. (Special Fee: \$25.00)	3	3	0	COP 2220 C PROGRAMMING Minimum grade of C in COP 1006. Hands-on study of C Programming language as applied to business and scientific applications. Includes arrays, pointers, functions, I/O operations and operating system interaction. (Special Fee: \$25.00)	3	3	0
COP XXXX ORACLE REPORT BUILDER Prerequisite: Minimum grade of C in COP XXXX Oracle Forms Builder II or departmental approval. Students will build a variety of standard and custom reports in a client-server environment. Working in a graphical user interface (GUI) environment, students will learn how to retrieve, display and format data in many styles to create tabular, matrix, mailing label and letter reports. They also will use the Intelligent and Remote Reports Server. (Special Fee: \$25.00)	3	3	0	COP 2222 ADVANCED C PROGRAMMING Prerequisite: Minimum grade of C in COP 2220. Continuation of C programming covering advanced data structures, including arrays, pointers, pointers to pointers, linked lists, binary trees, stacks, and hash tables. Also covers text and binary file I/O. (Special Fee: \$25.00)	3	3	0
COP XXXX SCRIPTING LANGUAGES Prerequisite: Minimum grade of C in COP 2822 or departmental approval. The syntax and semantics of scripting programming language will be included. Covers major scripting languages, including but not limited to: Perl, Tcl, JavaScript, VBScript and XML. Students will learn to write scripting language code, integrate the scripts into Web pages, and identify different uses and applications of scripts in Web sites and/or other multimedia projects. (Special Fee: 25.00)	3	3	0	COP 2224 C++ PROGRAMMING Prerequisite: Minimum grade of C in COP 2220. Introduction to Object-Oriented Programming (OOP) using C++ programming language. Covers class hierarchies and single, repeated, and multiple inheritance. Focuses on abstraction and information hiding. Covers in detail polymorphism and dynamic binding. (Special Fee: \$25.00)	3	3	0
COP 1006 INTRODUCTION TO PROGRAMMING CONCEPTS Introduction to the design and construction of computer programs. Covers various design tools including pseudocode, flowcharts, and hierarchy charts. Stresses structured techniques, modular design, and top-down design, coding and testing.	3	3	0	COP 2228 ADVANCED C++ Prerequisite: COP 2224. A continuation of COP 2224. The students will learn advanced topics for creating commercial quality software. The Microsoft Foundation Classes for creating graphical user interfaces in C++ will be covered. Students will be able to implement C++ programs using modern software techniques for distributed programming and programs that communicate using standard mechanisms such as OLE (Object Linking and Embedding) and COM (Common Object Model). Database connectivity from C++ programs using DAO and ODBC will be covered. (Special Fee: \$25.00)	3	3	0
COP 1332 INTRODUCTION TO VISUAL BASIC Prerequisite: Minimum grade of C in COP 1006. Study of the Visual Basic programming language with an emphasis on developing good programming practices. Topics include creating a graphical user interface, working with objects and events, decision and repetition structures, debugging and error handling, using multiple forms, data manipulation techniques, and an introduction to working with databases. Students will construct applications designed to run in a Windows environment. (Special Fee: \$25.00)	3	3	0	COP 2341 UNIX Students should have knowledge of computing fundamentals before taking this course. Study of UNIX operating system providing introduction to basic time-shared operating system concepts. Introduction to application programming using UNIX interprocess communication facility and services. UNIX shells, UNIX file system, and software tools and utilities covered. (Special Fee: \$25.00)	3	3	0
				COP 2700 DATABASE MANAGEMENT SYSTEMS Principles of database systems, architecture of database management systems, relational model conceptual design and requirement analysis, database design and normalization, query languages, multi-user and distributed database issues; practical use of a DBMS and building of a database application.	3	3	0

Course	Con	Voc	Course	Con	Voc		
COP 2740 INTRODUCTION TO ORACLE SQL, PL/SQL Prerequisite: Minimum grade of C in COP 2700 or departmental approval. This course provides an extensive introduction to data server technology. The class covers the concepts of relational databases and SQL and PL/SQL programming languages. Students are taught to create and maintain database objects and to store, retrieve, and manipulate data. In addition, students learn to create PL/SQL blocks of application code that can be shared by multiple forms, reports, and data management applications. Demonstrations and hands-on practice reinforce the fundamental concepts. This class is preparation for both the Oracle Application Developer and Database Administrator examinations. (Special Fee: \$25.00)	3	3	0	COP 2822 WEB PUBLISHING The student will learn to construct Web pages containing animated graphics, forms, frames, style sheets, XML, and Dynamic HTML. The course will also cover the software tools available to create Web pages, as well as the hardware and software requirements for setting up a Web site. (Special Fee: \$25.00)	3	3	0
COP 2741 ORACLE ENTERPRISE DATABASE ADMINISTRATION Prerequisite: Minimum grade of C in COP 2740. This course is designed to give Oracle Database Administrators (DBA) a firm foundation in basic administrative tasks. Through instructor-led learning, structured hands-on practices, and challenge-level exercise labs, the DBA will gain the necessary knowledge and skills to set up, maintain, and troubleshoot an Oracle database. (Special Fee: \$25.00)	3	3	0	COP 2823 ADVANCED WEB PUBLISHING - ACTIVE SERVER PAGES Prerequisites: COP 1332 and COP 2822. Web pages that allow users to enter data and view data from remote databases are the basis for much of the commercial usefulness of the Internet. In this course students learn the design and implementation of Active Server Pages (ASP) for web site data support. Visual Basic Script is used on a web server to handle data returned from forms that reside on web pages. The data is processed and response forms are created and sent back to the user. This is a hands-on course requiring all students to implement code for the client-side and server-side of the web page. (Special Fee: \$25.00)	3	3	0
COP 2800 INTRODUCTION TO JAVA PROGRAMMING Minimum grade of C in COP 1006. The syntax and semantics of the Java programming language will be covered. The creation of Java applications with emphasis on object-oriented programming. Students will become familiar with object-oriented design, including the creation of classes in Java and the use of existing classes as provided in the current version of Java API. (Special Fee: \$25.00)	3	3	0	COP 2930 SELECTED TOPICS IN COMPUTER PROGRAMMING Prerequisite: Departmental approval. Selected topics in computer programming based on the needs and areas of interest of the class and the professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
COP 2805 ADVANCED JAVA PROGRAMMING Prerequisite: Minimum grade of C in COP 2800. A continuation of COP 2800. Students will learn advanced concepts of programming in Java. This will include input/output in Java, multi-threaded applications, and creation of user interfaces in Java for both applications and applets. Distributed programming for the Internet is introduced. Students who complete this course will have covered the materials required for the Sun Microsystems' Certified Java Programmer examination. (Special Fee: \$25.00)	3	3	0				
COP 2821 ADVANCED VISUAL BASIC Prerequisite: Minimum grade of C in COP 1332 or departmental approval. A continuation of the study of the Visual Basic programming language. Topics covered include using ActiveX controls, creating and using objects and collections, comprehensive database processing, report generation, and distribution issues. (Special Fee: \$25.00)	3	3	0				

Course	Con	Voc
--------	-----	-----

Criminal Justice Institute

To register for any of the Criminal Justice Institute courses, you must apply and be accepted to a Criminal Justice Institute Program.

Courses offered through the Criminal Justice Institute may have different contact hours and vocational credits in different programs.

CORRECTIONS

Vocational Credits

CJD 0254 MEDICAL FIRST RESPONDER The Department of Transportation's first responder techniques needed in emergency medical situations along with major types of communicable diseases, signs and symptoms of each disease and the methods of transmission will be covered.	48	1.5
CJD 0704 CRIMINAL JUSTICE DEFENSIVE TACTICS This course of instruction includes the techniques used for an officer's personal safety and those necessary to subdue, search and transport resisting individuals. The use of restraining devices, impact weapons and pressure points are covered.	106	3.5

Course	Con	Voc	Course	Con	Voc
CJD 0705 CRIMINAL JUSTICE WEAPONS This course provides instruction in the use of officer firearms which includes handgun and shotgun. Safety procedures and ammunition use are also covered. Instruction includes the use of chemical agents, with practical exercises included.	64	2.0	CJD 0773 INTERPERSONAL SKILLS I The needs of various groups within society are addressed including juveniles, elderly, ethnic, cultural, mentally ill, retarded, physically handicapped and substance abusers. Community relations and common courtesy will be discussed. Intervention techniques for suicide, domestic violence, and other crisis are reviewed. Stress recognition and reduction are included.	62	2.0
CJD 0741 EMERGENCY PREPAREDNESS Potential types of emergency situations that may occur within a correctional facility are examined and which action should be taken. Hostage situations, hazardous material, unusual occurrences, and riots will also be covered.	26	1.0	ELECTIVE COURSE:		
CJD 0750 INTERPERSONAL SKILLS II Verbal and nonverbal communication is explored with emphasis placed on task accomplishment, understanding verbal communication correctly, and reinforcing positive and negative behavior. Also discussed are topics on supervision techniques, inmate societies, homosexuality, and human adjustment to imprisonment.	50	1.5	CJD 0939 CRIMINAL JUSTICE EXAM REVIEW An overview is given which helps prepare the student for the state exam.	24	1.0
CJD 0752 CORRECTIONAL OPERATIONS An overview of daily operations within a correctional facility are discussed to include: Intake procedures, fingerprinting, disciplinary procedures, inmate movement, release procedures and key control.	64	2.0	LAW ENFORCEMENT Vocational Credits		
CJD 0770 CRIMINAL JUSTICE LEGAL I This course provides the student with an introductory overview of the criminal justice system and a history of law. The foundation and basic components of law are studied with specific focus upon officer application. Court procedure and testimony are examined.	46	1.5	CJD 0254 MEDICAL FIRST RESPONDER The Department of Transportation's first responder techniques needed in emergency medical situations along with major types of communicable diseases, signs, and symptoms of each disease and the methods of transmission will be covered.	48	1.5
CJD 0771 CRIMINAL JUSTICE LEGAL II Constitutional law and its application to the public and officers are examined. Law including evidence procedures, arrest law, search and seizure and various statutory laws that are common to police and correctional officers is studied. Elements of various crimes, civil law and civil and criminal liability of officers are covered.	22	.5	CJD 0704 CRIMINAL JUSTICE DEFENSIVE TACTICS This course of instruction includes the techniques used for an officer's personal safety and those necessary to subdue, search and transport resisting individuals. The use of restraining devices, impact weapons and pressure points are covered.	106	3.5
CJD 0772 CRIMINAL JUSTICE COMMUNICATIONS The student will learn the report writing process from the interview, statement taking, note taking and the final report product with practical exercises included. The difference between interviewing and interrogation is explored. Interpersonal communication skills are covered along with radio and telephone procedures.	42	1.0	CJD 0705 CRIMINAL JUSTICE WEAPONS This course provides instruction in the use of officer firearms which includes handgun and shotgun. Safety procedures and ammunition use are also covered. Instruction includes the use of chemical agents, with practical exercises included.	64	2.0
			CJD 0723 LAW ENFORCEMENT VEHICLE OPERATIONS The components of the police driving environment are explored. Practical exercises are conducted on the driving range.	32	1.0
			CJD 0730 CRIMINAL JUSTICE LEGAL III Various traffic and drivers license laws and their specifics to police application are studied. Legal considerations of officer vehicle operation is also explored.	32	1.0
			CJD 0731 LAW ENFORCEMENT PATROL In this course the student addresses the daily skills and techniques needed by officers to perform patrol tactics and respond to various types of calls. Methods of approach to various high-risk situations are explored with practical exercises included.	64	2.0

Course	Con	Voc	Course	Con	Voc	
CJD 0732 LAW ENFORCEMENT TRAFFIC The student studies traffic enforcement and control with the inclusion of DUI offenses and enforcement. Traffic accident investigation, scene management and reporting procedures are reviewed.	46	1.5	CROSSOVER: CORRECTIONS TO LAW ENFORCEMENT Vocational Credits			
CJD 0734 LAW ENFORCEMENT INVESTIGATIONS This block addresses investigation of various crimes including property crimes, persons crimes, narcotic offenses, vice, organized crime, terrorist activity, bombing incidents and death investigations.	64	2.0		CJD 0723 LAW ENFORCEMENT VEHICLE OPERATIONS The components of the police driving environment are explored. Practical exercises are conducted on the driving range.	32	1.0
CJD 0760 CRIMINAL JUSTICE LEGAL I This course provides the student with an introductory overview of the criminal justice system and a history of law. The foundation and basic components of law are studied with specific focus upon officer application. Court procedure and testimony are examined.	46	1.5		CJD 0730 CRIMINAL JUSTICE LEGAL III Various traffic and drivers license laws and their specifics to police application are studied. Legal considerations of officer vehicle operation is also explored.	32	1.0
CJD 0761 CRIMINAL JUSTICE LEGAL II Constitutional law and its application to the public and officers is examined. Law including evidence procedures, arrest law, search and seizure and various statutory laws that are common to police and correctional officers are studied. Elements of various crimes, civil law and civil and criminal liability of officers are covered.	48	1.5		CJD 0731 LAW ENFORCEMENT PATROL In this course the student addresses the daily skills and techniques needed by officers to perform patrol tactics and respond to various types of calls. Methods of approach to various high-risk situations are explored with practical exercises included.	64	2.0
CJD 0762 CRIMINAL JUSTICE COMMUNICATIONS The student will learn the report writing process from the interview, statement taking, note taking and the final report product with practical exercises included. The difference between interviewing and interrogation are explored. Interpersonal communication skills are covered along with radio and telephone procedures.	56	2.0		CJD 0732 LAW ENFORCEMENT TRAFFIC The student studies traffic enforcement and control with the inclusion of DUI offenses and enforcement. Traffic accident investigation, scene management and reporting procedures are reviewed.	46	1.5
CJD 0763 INTERPERSONAL SKILLS I The needs of various groups within society are addressed including juveniles, elderly, ethnic, cultural, mentally ill, retarded, physically handicapped and substance abusers. Community relations and common courtesy will be discussed. Intervention techniques for suicide, domestic violence, and other crisis are reviewed. Stress recognition and reduction are included.	66	2.0		CJD 0734 LAW ENFORCEMENT INVESTIGATIONS This block addresses investigation of various crimes including property crimes, persons crimes, narcotic offenses, vice, organized crime, terrorist activity, bombing incidents and death investigations.	64	2.0
ELECTIVE COURSES:				CJD 0781 CROSSOVER This block provides an overview of various law enforcement subjects to include: legal, domestic violence, interview and interrogation, suicide prevention, crime prevention and report writing. The course is designed for certified corrections officers seeking state certification in law enforcement.	48	1.5
CJD 0715 CRIMINAL JUSTICE TRAINING EXERCISES These practical exercises will provide the student with realistic experience that covers the majority of topics included in the Academy courses.	16	.5		ELECTIVE COURSE:		
CJD 0939 CRIMINAL JUSTICE EXAM REVIEW An overview is given which helps prepare the student for the state exam.	24	1.0		CJD 0939 CRIMINAL JUSTICE EXAM REVIEW An overview is given which helps prepare the student for the state exam.	20	.5

Course	Con	Voc	Course	Cr	Cls	Lab
AUXILIARY LAW ENFORCEMENT OFFICER Vocational Credits						
CJD 0704	106	3.5	CCJ 2102	1	1	0
CRIMINAL JUSTICE DEFENSIVE TACTICS This course of instruction includes the techniques used for an officer's personal safety and those necessary to subdue, search and transport resisting individuals. The use of restraining devices, impact weapons and pressure points are covered.			CAREER CHOICES IN CRIMINAL JUSTICE This course exposes the student to the diversity of requirements, needs, and career opportunities within the criminal justice system and related fields. It covers various job search strategies and the preparation of resumes. Students participate in mock job interviews.			
CJD 0705	64	2.0	CCJ 2122	3	3	0
CRIMINAL JUSTICE WEAPONS This course provides instruction in the use of officer firearms which includes handgun and shotgun. Safety procedures and ammunition use are also covered. Instruction includes the use of chemical agents, with practical exercises included.			MULTICULTURAL LAW ENFORCEMENT This course examines various strategies for peace keeping by law enforcement in today's diverse multicultural society. It is designed to assist students in understanding the pervasive influences of culture, race, and ethnicity in the workplace and in the communities that law enforcement serves.			
CJD 0992	102	3.0	CCJ 2210	3	3	0
LAW ENFORCEMENT VOLUNTEER PERSONNEL This course provides job related training to students seeking a position as a Law Enforcement Volunteer and is a prerequisite course for certification as a Law Enforcement Auxiliary Officer.			CRIMINAL LAW This course examines crime and the elements of offenses. Various mental states, capacities to commit crimes, and defenses to criminal liability are intensely studied.			
			CCJ 2220	3	3	0
			CRIMINAL EVIDENCE AND PROCEDURES This course reviews the rules of evidence, methods of legally collecting and preserving evidence, rules and procedures regulating admissibility of evidence and presentation of evidence in court. Special emphasis is placed on constitutional issues of search and seizure and procedures.			
			CCJ 2300	3	3	0
			INTRODUCTION TO CORRECTIONS Introductory study of corrections to provide students with an overall view of the nature, philosophy, operations and goals of secure and non-secure correctional institutions.			
			CCJ 2330	3	3	0
			COMMUNITY CORRECTIONS Overview of probation and its process, parole and community-based corrections programs which are alternatives to corrections.			
			CCJ 2452	3	3	0
			CRIMINAL JUSTICE ADMINISTRATION Introduction of the fundamentals of criminal justice organization, management and administration. In addition to other concepts, students will be exposed to policy/procedure and control of various criminal justice agencies (ranging from local to state to federal levels and from small to large).			
			CCJ 2500	3	3	0
			JUVENILE JUSTICE SYSTEMS Introduction and overview of juvenile justice systems in regards to the treatment, images, explanation, prevention and context of delinquency within the criminal justice system.			

Course	Cr	Cls	Lab
--------	----	-----	-----

Criminal Justice Technology

(College Credit)

CCJ 1010	3	3	0
CRIMINOLOGY Study of nature and extent of crime and delinquency, causes and explanations of criminal behavior and rationale of crime control and treatment in United States.			
CCJ 1020	3	3	0
INTRODUCTION TO CRIMINAL JUSTICE Introduction to and overview of history, philosophy and operations of criminal justice system.			
CCJ 2022	3	3	0
CONTEMPORARY ISSUES IN CRIMINAL JUSTICE Discussion and examination of current issues and problems of interest and concern to criminal justice system.			
CCJ 2100	3	3	0
POLICING SYSTEMS AND PROCEDURES This course will provide an overview and examination of the function, organization and various methods of policing in the United States.			

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
CCJ 2802 INTRODUCTION TO SECURITY This course will explore various aspects of security, including, but not limited to, community, retail, corporate, business and industrial problems and concerns. In addition, governmental and legal aspects of security will be examined.	3	3	0	FSS 1240C CLASSICAL CUISINE Students prepare and learn the skills and management theories involved in classical dishes. Concentration is on the basics of classical cuisine, such as stocks, soups, and sauces. Attention is given to the management tasks of portion control, costing and presentation. Special emphasis is given to classics such as emulsion sauces, thickening agents, and sauces derived from the Mother sauces. Student must successfully pass written and practical examination covering a variety of techniques and procedures. (Special fee: \$100.00)	3	1	5
CCJ 2930 SELECTED TOPICS IN CRIMINAL JUSTICE For students interested in exploring further special criminal justice topics through research, discussions and observations. Topics selected from areas of law enforcement, corrections, courts and loss prevention. Students may earn from one to three hours of credit each time course is offered. May be repeated for credit, provided different topic explored each time, but grade forgiveness cannot be applied.	1 - 3	variable		FSS 1246C BAKING AND PASTRIES I Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment normally found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures. (Special fee: \$100.00)	3	1	5
CCJ 2940 FIELD OBSERVATION Prerequisites: Completion of at least 30 college-level semester hours and departmental approval. This course will allow the student to observe practical, workplace applications of classroom theory and to process that experience in a classroom setting. The student also will learn ethical and procedural requirements of observation within a criminal justice setting.	3	1	4	FSS 2204C QUANTITY FOOD PRODUCTION II Prerequisite: FSS 1203C. Methods of vegetable, starch, meat, fish, and poultry cookery are practiced, including the basic cooking techniques: sautéing, roasting, poaching, braising and frying. Student must successfully pass written and practical examinations covering a variety of cooking techniques. (Special fee: \$100.00)	4	2	6
CJT 2110 CRIMINAL INVESTIGATION Recording crime scene, collecting and preserving evidence. Familiarizes students with police crime laboratory and interview and interrogation theories.	3	3	0	FSS 2206C QUANTITY FOOD PRODUCTION III Prerequisite: FSS 2204C. Through lectures and demonstrations the student will learn to identify primal cuts of meats and poultry; how they are processed into restaurant portion size cuts; to identify fish and seafood quality; cooler management; and butchery techniques. Speed scratch will be reviewed and practiced. Hot food preparations will be practiced. Student must successfully pass written and practical examinations covering a variety of cooking techniques. (Special fee: \$100.00)	4	2	6
Culinary Management				FSS 2242C INTERNATIONAL AND REGIONAL FOODS Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examinations covering a variety of cooking techniques. (Special fee: \$100.00)	3	1	5
FOS 2201 FOOD SERVICE SANITATION MANAGEMENT Acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. It presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and it provides a basic understanding of quality sanitation management	3	3	0				
FSS 1203C QUANTITY FOOD PRODUCTION I Student will acquire the fundamental concepts, skills and techniques involved in the management of resources, use of recipes, use and care of equipment, and evaluation of food products. Special emphasis is given to practical demonstrations in breakfast cookery, salads, dressings, cold sauces, sandwiches, and safety and sanitation principles. Student must successfully pass written and practical cooking examination covering a variety of techniques and procedures. (Special fee: \$100.00)	3	1	5				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
FSS 2247C BAKING AND PASTRIES II Prerequisite: FSS 1246C. The student will apply advanced techniques in the baking science and be able to demonstrate production management procedures in the pastry department. Students will prepare a variety of pies, tarts, and meringues. Modern trend desserts, such as low-fat desserts will be produced. Student must successfully pass written and practical examinations covering a variety of cooking techniques. (Special fee: \$100.00)	3	1	5	OST 1746 FOOD SERVICE COMPUTER APPLICATIONS Students are introduced to PC hardware and software including the Windows operating environment. Concentration is on basic word processing and spreadsheet applications that including menu creation and inventory value spreadsheets.	1	1	0
FSS 2248C GARDE-MANGER This course introduces three main focuses of the cold kitchen: reception foods, à la carte appetizers, and grand-buffet arrangements. Students learn to prepare canapés, hot and cold hors d'oeuvres, appetizers, pâtés, galantines, terrines, and salads. Curing and smoking techniques for seafood and poultry items are practiced. Modern decorating and food arranging techniques for practical and show purposes are emphasized. Students learn techniques on how to sculpture centerpieces using various mediums. Ice carving techniques are discussed. (Special fee: \$100.00)	3	1	5	DAA 1100 MODERN DANCE I Basic theory and practice in using body movements to express or demonstrate ideas or thoughts. Broadens knowledge of rhythms, music and self-expression through the medium of movement. May be repeated for credit for a maximum of 4 credit hours, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0
FSS 2284 CATERING AND BANQUET MANAGEMENT Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project, including rental and transportation. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table set-up. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.	3	2	2	DAA 1101 MODERN DANCE II Prerequisite: DAA 1100 or departmental approval. Further development of modern dance techniques, rhythms, music and self-expression. May be repeated for credit for a maximum of 4 credit hours, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0
FSS 2500 FOOD AND BEVERAGE COST CONTROL Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through both electronic spreadsheets and manual systems.	3	3	0	DAA 1200 BALLET I Basic techniques at the barre using basic foot, arm and body positions. Center floor work covers basic adagio movements and allegro combinations and uses classical sequences for traveling across the floor. Leotards, tights and ballet shoes needed. May be repeated for credit for a maximum of 4 credit hours, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0
FSS 2942 INTERNSHIP IN CULINARY MANAGEMENT Prerequisites: Satisfactory completion of required college-preparatory courses; twelve Valencia college-level credit hours including FOS 2201, FSS 1203C and FSS 1240C or departmental approval. This course provides a planned work-based experience that will provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 3 Credits			DAA 1201 BALLET II Prerequisite: DAA 1200 or departmental approval. Student experiences an intensification of barre and centre work. Students are introduced to eight body directions with corresponding arms and body alignment, pirouettes and the use of beats. May be repeated for credit for a maximum of 4 credit hours, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0
HUN 1004 HEALTHY CUISINE/NUTRITION Students acquire basic knowledge about nutrients, the nutritional value of food, dietary requirements and contemporary nutritional issues in health and diet. Rationale for dietary modifications, menu design and alteration, ingredient and food selection are emphasized.	1	1	0	DAA 1680 REPETORY I Prerequisite: DAA 1100 or departmental approval. The study and practice of selected works of dance repertory. Based on technical proficiency, a student may be selected for projects such as lecture demonstrations, workshops, and dance concerts. May include additional performances away from school which would require time apart from the regular curriculum. May be repeated for credit, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0
				DAA 1681 REPETORY II Prerequisite: DAA 1680 or departmental approval. Continuation of DAA 1480. May be repeated for credit, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
DAA 2102 INTERMEDIATE MODERN DANCE I Prerequisite: DAA 1101 or departmental approval. Intensification of theory and practice in using body movements to express or demonstrate ideas or thoughts. Increase knowledge of rhythms, music and dynamics. May be repeated for credit for a maximum of 4 credit hours, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0	DAA 2930 SELECTED TOPICS IN DANCE Selected topics in dance based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for credit, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	1 - 3	variable	
DAA 2103 INTERMEDIATE MODERN DANCE II Prerequisite: DAA 2102 or departmental approval. Further development of Intermediate Modern Dance I. Analysis of discipline expanded. May be repeated for credit for a maximum of 4 credit hours, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0	DAA 2942 Internship in DANCE Prerequisites: Satisfactory completion of required college-preparatory courses; twelve Valencia college-level credits including DAA 1101 or DAA 1201 or DAA 2561 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	Credits	
DAA 2202 INTERMEDIATE BALLET I Prerequisite: DAA 1201 or departmental approval. This course provides an intermediate/advanced level in the discipline of ballet. May be repeated for credit for a maximum of 4 credit hours, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0	Database Technology See Computer Information Technology for course descriptions.			
DAA 2203 INTERMEDIATE BALLET II Prerequisite: DAA 2202 or departmental approval. This course provides an intermediate/advanced level in the discipline of ballet. May be repeated for credit for a maximum of 4 credit hours, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	2	3	0	Dental Hygiene To register for any of the Dental Hygiene courses, you must apply and be accepted to the Dental Hygiene program.			
DAA 2500 JAZZ DANCE I Student learns coordinated movements with isolated parts of body while using jazz style of dance. Basic routines choreographed to pop, jazz and rock music. (Special Fee: \$25.00)	2	3	0	DEH 1003 FUNDAMENTALS OF DENTAL HYGIENE Prerequisites: DES 1020 and DES 1020L. Corequisites: DEH 1003L, DES 1800, and DES 1800L. This course is designed to provide the student with knowledge of the basic principles of instrumentation and instrument design and with instrumentation skills necessary to perform in subsequent clinical dental hygiene courses. Also introduces the concept of oral health and disease with emphasis on preventive dentistry through the use of plaque control methods and caries preventive agents. An introduction to basic computer usage, including case studies and Internet access, is incorporated in lectures and multiple class activities.	3	3	0
DAA 2501 JAZZ DANCE II Prerequisite: DAA 2500 or departmental approval. Continuation of DAA 2560 using more lyrical and rock. (Special Fee: \$25.00)	2	3	0	DEH 1003L DENTAL HYGIENE INSTRUMENTATION Corequisites: DEH 1003, DES 1800, and DES 1800L. Designed for student to apply basic principles of instrumentation, instrument design, and fundamental dental hygiene skills in clinical setting. Students perform clinical procedures on student partners and mannequins to develop instrumentation and other clinical skills. (Special Fee: \$64.00)	2	0	6
DAA 2610 DANCE COMPOSITION AND IMPROVISATION I Prerequisite: DAA 1200 or DAA 1100 or departmental approval. The analysis of dance movement through the art of choreography. Students will experience movement imagery designed to develop the dancer's imagination and will explore basic spatial, rhythmic and dynamic materials through group improvisations and individual studies.	2	3	0	DEH 1130C GENERAL AND ORAL HISTOLOGY Corequisites: DEH 1800 and DEH 1800L. Detailed study of minute structures of tissues. Lecture material includes morphology of different tissues, early embryonic development and histologic features of the structures of the oral cavity of particular interest to the dental hygienist.	2	1	3
DAA 2611 DANCE COMPOSITION AND IMPROVISATION II Prerequisite: DAA 2610 or departmental approval. Further exploration of choreographic tools and improvisational exercise. Emphasis is placed on developing personal style.	2	3	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
DEH 1603 PERIODONTOLOGY I Prerequisites: DEH 1003 and DEH 1003L. Presents the tissues of the periodontium and the effects of gingival and periodontal disease processes. Includes disease classification, clinical assessment and treatment planning for disease management.	1	1	0	DEH 2504 ADVANCED PRINCIPLES OF DENTAL HYGIENE SEMINAR Prerequisites: DEH 2804 and DEH 2804L. Furthers students' knowledge of recent advances in dentistry and dental hygiene. Selected topics include recent research in periodontology, computers in dentistry, and dental specialties.	1	2	0
DEH 1800 DENTAL HYGIENE I Prerequisites: DES 1100, DES 1100L, DES 1800, DES 1800L, DEH 1003, DEH 1003L, DES 1220, and DES 1220L. Corequisite: DEH 1800L. Continuation of DEH 1003 with advanced topics including ultrasonic instrumentation, root debridement, treatment planning, recall, instrument sharpening, and desensitization of root surfaces, air abrasive polishing, topical anesthesia and syringe preparation.	2	2	0	DEH 2602 PERIODONTICS Prerequisites: DEH 1130C and MCB 2010C. Presents classification of periodontal disease, clinical presentation, causative factors, treatment planning, therapy and dental hygienist's role in treatment with periodontal disease. Includes lecture in root debridement and gingival curettage.	2	2	0
DEH 1800L CLINICAL DENTAL HYGIENE I Prerequisite: Current AHA ("C" course) CPR card. Corequisite: DEH 1800. Students begin patient care in dental hygiene clinic with emphasis on medical histories, oral examination procedures, instrumentation, radiographs, and topical fluoride application. Time allotted for clinical seminar. (Special Fee: \$100.00)	5	0	15	DEH 2604 PERIODONTOLOGY II Prerequisites: DEH 1603. A continuation of Periodontology I with emphasis on surgical and non-surgical therapies and related periodontal treatment.	1	1	0
DEH 1802 DENTAL HYGIENE II Prerequisites: DEH 1800, DEH 1800L, DEH 1603 and HUN 1001. Corequisite: DEH 1802L. Alterations in treatment for special patients such as geriatric, and physically and mentally handicapped. Covers wheelchair transfers. Reviews dietary analysis and analysis of student's own diet.	2	2	0	DEH 2605 PERIODONTOLOGY SEMINAR Prerequisites: DEH 2604. Application of theory to selected case studies and exposure to new treatment modalities for periodontal disease. Review of current research on the relationship between systemic diseases and periodontal disease.	1	2	0
DEH 1802L CLINICAL DENTAL HYGIENE II Prerequisite: DES 1600. Corequisite: DEH 1802. Emphasizes increasing skill in patient care, instrumentation, and radiographs. Students perform additional clinical services such as amalgam polishing, pit and fissure sealants, and alginate impressions. Selected off-campus clinical sites enhance clinical experience with special patients. Time allotted for clinical seminar. (Special Fee: \$60.00)	3	0	9	DEH 2700 COMMUNITY DENTAL HEALTH I Prerequisite: SPC 1600. Corequisite: DEH 2804 and DEH 2804L. Introduces student dental hygienists to the study of various aspects of community dentistry/public health and basic concepts of surveying, analysis, planning, implementation, and evaluation in public health. Statistical analysis, research methodology, and dental health education presentations are included.	3	3	0
DEH 2300 PHARMACOLOGY Presentation of the physical and chemical properties, dosage, methods of administration and therapeutic usage of pharmaceutical preparation used in dentistry.	2	2	0	DEH 2701 COMMUNITY DENTAL HEALTH II Prerequisite: DEH 2700. Gives student dental hygienists an opportunity to apply concepts and methods learned in DEH 2700 at community level. Class project designed and implemented.	1	1	0
DEH 2400 GENERAL AND ORAL PATHOLOGY Prerequisite: DEH 1130C. Introduction to general pathology with consideration of more common diseases affecting the human body. Particular emphasis on study of pathological conditions of mouth, teeth and their supporting structures and relationships to systemic disturbances.	3	3	0	DEH 2804 DENTAL HYGIENE III Prerequisites: DEH 1802, DEH 1802L, DEH 2604 and DEH 2300. Corequisites: DEH 2804L. Includes study of case documentation, intraoral photography, and myofunctional therapy. Continues study of treatment considerations for compromised patients. Time allotted for case studies and assigned Web sites.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
DEH 2804L CLINICAL DENTAL HYGIENE III Prerequisites: DEH 1802 , DEH 1802L and DEH 2604. Corequisite: DEH 2804. Emphasizes proficiency in oral prophylaxis, radiographic techniques, soft tissue curettage, root debridement, dietary analysis, treatment planning, and diagnostic models. Students prepare case documentation on selected clinical patients and participate in patient care at off-campus clinical sites. Time allotted for clinical seminar. (Special Fee: \$80.00)	4	0	12	DES 1220 DENTAL RADIOGRAPHY Corequisite: DES 1220L. Provides student with background on nature, physical behavior and biological effect of radiation as well as radiation hygiene.	2	2	0
DEH 2806L CLINICAL DENTAL HYGIENE IV Prerequisites: DEH 2804 and DEH 2804L. Corequisite: DEH 2810. Emphasizes incorporation of all treatment modalities presented in the series of clinical dental hygiene courses. Introduces nitrous oxide conscious sedation. Students continue to participate in patient care at off-campus clinical sites. Time allotted for clinical seminar. (Special Fee: \$100.00)	5	0	15	DES 1220L DENTAL RADIOGRAPHY LABORATORY Corequisite: DES 1220. Develops student proficiency in exposing and processing diagnostically acceptable radiographs. Lab sessions provide experience in x-ray safety procedures, exposure, processing, mounting and interpreting radiographs. (Special Fee: \$20.00)	1	0	3
DEH 2810 DENTAL HYGIENE IV Prerequisites: DEH 2804, DEH 2804L, and DEH 2400. Corequisite: DEH 2806L. Includes study of ethics, jurisprudence and practice management, resume writing and employment opportunities.	2	2	0	DES 1600 DENTAL OFFICE EMERGENCIES Prerequisites: DES 1800 and DES 1800L. Basic skills necessary to function effectively as a dental team member in medical emergencies in the dental office. Emphasis on prevention and management of emergency situations. (CPR certification not included in course.)	1	1	0
DEH 2930 SELECTED TOPICS IN DENTAL HYGIENE Prerequisite: Departmental approval. For students interested in obtaining additional dental hygiene skills. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 5	variable		DES 1800 INTRODUCTION TO CLINICAL PROCEDURES Corequisites: DES 1800L, DEH 1003, and DEH 1003L. Fundamental information necessary for clinical performance in DES 1800L and subsequent clinical courses.	1	1	0
DES 1020 DENTAL ANATOMY Corequisite: DES 1020L. Study of skeletal, muscular, circulatory, nervous and glandular systems of head and neck. Emphasizes tooth morphology and function.	2	2	0	DES 1800L INTRODUCTION TO CLINICAL PROCEDURES LAB Corequisites: DES 1800, DEH 1003, and DEH 1003L. Clinical application of material covered in DES 1800. Students perform clinical assessment procedures on student partners to develop clinical skills and perform acceptable infection control skills. (Special Fee: \$20.00)	1	0	3
DES 1020L DENTAL ANATOMY LAB Corequisite: DES 1020. Includes identification of permanent and primary dentition, the study of skeletal portions of human skull, blood and nerve supply, and muscles and glands associated with head, neck and oral cavity. (Special Fee: \$20.00)	1	0	3	GRA 1XXX INTRODUCTION TO DIGITAL MEDIA The course will present the various applications for digital media. Industry-standard operating systems, hardware, and software utilized to produce digital media design elements will be utilized to plan and implement a digital media project. (Special Fee: \$25.00)	2	1	2
DES 1100 DENTAL MATERIALS Corequisite: DES 1100L. Includes study of characteristics, properties, and application of materials used in dentistry.	2	2	0	GRA 2XXX DIGITAL MEDIA AUTHORIZING I Prerequisite: GRA 2XXX Imaging for Digital Media or GRA 2XXX Scripting Languages or departmental approval. Students plan and author interactive digital media presentations using industry-standard software, scripting languages and basic programming techniques. Various steps of development, implementation, testing, debugging and final output will be exhibited with special attention to cross-platform scripting for multiple venues. (Special Fee: \$25.00)	3	2	2
DES 1100L DENTAL MATERIALS LAB Corequisite: DEH 1100. Includes properties, manipulation and application of dental materials. Students practice manipulating and using materials commonly used in dental and dental hygiene practice. (Special Fee: \$20.00)	1	0	3				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
GRA 2XXX DIGITAL MEDIA AUTHORIZING II Prerequisite: GRA 2XXX Digital Media Authoring I or departmental approval. Using industry-standard authoring software and scripting languages, students author an advanced interactive presentation through various stages of development with emphasis on testing and debugging. Special attention is given to creating modular functions for reuse in multiple projects and extending the capabilities of the authoring program. (Special Fee: \$25.00)	3	2	2	CAP 2203 CUSTOMIZING AND DIRECTORIES - CADD Prerequisites: ETD 1320 and ETD 1350. Provides hands-on experience in writing of macros and development of menus, followed by instruction in enhancing autocad system environment. Presents autolisp programming to develop more efficient macros and add drafting and calculation functions to commands. (Special Fee: \$25.00)	3	2	2
GRA 2XXX DIGITAL MEDIA PRODUCTION Prerequisite: COP 2822 Web Publishing and GRA 2XXX Imaging for Digital Media or departmental approval. Participation by student as a digital media production specialist for interactive venues such as: presentations, training, games, simulation or Web sites. (Special Fee: \$25.00)	3	0	3	ETD 1031C INTRODUCTION TO CONSTRUCTION/DRAFTING TECHNOLOGY Overview of experience, academic and technical requirements in construction/architecture, drafting, civil technology and surveying. Introduction to computers and application software. (Special Fee: \$25.00)			
GRA 2XXX IMAGING FOR DIGITAL MEDIA Prerequisite: GRA 1XXX Introduction to Digital Media or departmental approval. The course teaches the use of industry-standard computers and software to create original or edit existing images and type for digital media design. Various resources for image capture and creation will be explored. (Special Fee: \$25.00)	3	2	2	ETD 1100C ENGINEERING DRAWING Survey of principles and practices involved in making and reading engineering drawings. Emphasis placed on lettering, industrial symbolism, visualization, orthographic projection and line techniques. (Special Fee: \$25.00)	3	2	2
GRA 2943 INTERNSHIP IN DIGITAL MEDIA Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including GRA 2XXX Digital Media Production or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		ETD 1320 INTRODUCTION TO CADD Engineering drawing recommended. Introduction to computer-aided drafting/design. Emphasizes skills and competencies necessary to function in systems drafting environment. Includes keyboard commands, menu printer/plotter, input devices, computer terminology and systems operation. Provides hands-on experience to create, save and retrieve drawings having various shapes, lines, types, dimensions and layers. (Special Fee: \$25.00)	3	2	2
GRA XXXX WEB AND DIGITAL MEDIA PROJECT MANAGEMENT Prerequisites: CIS XXXX Introduction to Operating Systems, COP 2822 Web Publishing, and GRA 2XXX Multimedia Authoring or departmental approval. This class presents a comprehensive examination of web and digital media project management, including content inventory databases, scheduling, cost estimating, and proposal and contract writing. Copyright and intellectual property laws, testing, team building and supervising also are covered. (Special Fee: \$25.00)	3	2	2	ETD 1328C INTRODUCTION TO MICROSTATION Previous engineering drawing experience recommended. Introduction to computer aided drafting/design. Emphasizes skills and competencies needed to function in systems drafting environment. Includes keyboard commands, menu printer/plotter, input devices, computer terminology and systems operation. Provides hands-on experience to create, save and retrieve drawings having various shapes, lines, types, dimensions and levels. MicroStation software will be used in this course. (Special Fee: \$25.00)	4	4	0
Drafting and Design Technology				ETD 1350 ADVANCED CADD Prerequisite: ETD 1320 or departmental approval. Provides experienced CADD student opportunity to approach detailed and intricate drafting and design problems from computer perspective. Provides hands-on experience in creating custom menus, slides, text fonts, attributes, extractions, 3-D drawings and rotations. (Special Fee: \$25.00)	3	2	2
CAP 2201 3-D CADD Prerequisite: ETD 1350 or departmental approval. Provides experienced CADD student with advanced three-dimensional concepts needed for drawing and editing 3-D wire frame or surface models. Teaches creating and orienting 3-D faces along with geometric considerations. Provides hands-on experience with CADD software to produce advanced drawings. (Special Fee: \$25.00)	3	2	2				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
ETD 1701 MECHANICAL DRAFTING I Prerequisite: ETD 1100C. Drawing basic machine elements and subassemblies including screw threads, linkage, gears and cams with consideration to precision and limit dimensioning, tolerance allowances and limits. Study of working assembly and outline drawings with attention to drawing of assembly and details from pictorial drawings and sectional views of assemblies. (Special Fee: \$25.00)	3	2	2	ETD 2942 INTERNSHIP IN DRAFTING & DESIGN TECHNOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including ETD 1320, ETD 1350 or departmental approval. This course provides a planned work-based experience that will provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
ETD 2455 ELEMENTS OF TOOL DESIGN Prerequisite: ETD 1701 or departmental approval. Study in fundamentals of tool design with emphasis on basic principles of tool development, jigs, fixtures and devices for efficient and economical product manufacturing. Includes, in addition to the planning and design of tools, preparation of working drawings from which tools are made. (Special Fee: \$25.00)	3	3	0	MTB 2321 TECHNICAL MATHEMATICS Fundamental arithmetic, geometry, and algebra operations including algebraic expressions, exponents, factoring and linear and curvilinear equations, graphs of functions and equations, various coordinate systems, solution of right triangles and oblique triangles by means of trigonometric functions; word problems and engineering/surveying/construction applications. Use of scientific calculator.	4	4	0
ETD 2641 ELECTROMECHANICAL DRAFTING Prerequisite: ETD 1100C or departmental approval. Study in fundamentals of electromechanical drafting designed to provide student with basic concepts and principles needed to prepare electromechanical working drawings. Student introduced in laboratory to various circuit elements and devices used in preparation of writing diagrams, schematics, block diagrams, layout of electronic chassis and wire harnesses. Emphasis on printed circuit board layout, as well as advanced microcircuit and integrated circuit drafting techniques. (Special Fee: \$25.00)	4	4	0	Economics			
ETD 2702 MECHANICAL DRAFTING II Prerequisite: ETD 1701. Continuation of ETD 1701. Includes basic instruction in piping and structural drawing as related to mechanical drafting; integrates knowledge previously acquired in mechanical mechanisms and introduces charts, graphs, diagrams and various pictorial presentations of engineering information. (Special Fee: \$25.00)	3	2	2	ECO 1000 BASIC ECONOMICS General survey of basic economic concepts and institutions to prepare student for intelligent citizenship. Emphasis on principles of production, determination of prices, distribution of income and economic problems of everyday life. Not intended for majors in economics or certain business curricula requiring six semester hours in ECO 2013 and ECO 2023. No credit granted if ECO 2013 and/or ECO 2023 have been satisfactorily completed.	3	3	0
ETD 2930 SELECTED TOPICS IN DRAFTING AND DESIGN TECHNOLOGY Prerequisite: Departmental approval. Provides exposure to various technical and non-technical disciplines in which student is likely to become involved upon entry into drafting and design environment. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		ECO 2013 PRINCIPLES OF ECONOMICS-MACRO Emphasis on study of macroeconomics: national income accounting, consumption, saving and investment, government spending in economic activity, influence of government money and banking, problems of inflation and unemployment, international trade and its impact on domestic economic activity. For prospective economics majors and students with interests in specialized business curricula, completion of full Principles of Economics sequence (ECO 2013 and ECO 2023) is highly recommended.	3	3	0
ETD 2941 INTERNSHIP EXPLORATION IN DRAFTING & DESIGN Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including EGN 1111C or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		ECO 2013H PRINCIPALS OF ECONOMICS MACRO - HONORS Same as ECO 2013 with honors level content. Honors program permission required.	3	3	0
				ECO 2023 PRINCIPLES OF ECONOMICS-MICRO Introduction to economic theory and fundamentals of economic analysis. Emphasis on study of microeconomics: market structure, price determination, factors of production, distribution of income and effects of monopoly and oligopoly on markets. For prospective economics majors and students with interests in specialized business curricula, completion of full Principles of Economics sequence (ECO 2013 and ECO 2023) is highly recommended.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
ECO 2023H PRINCIPLES OF ECONOMICS-MICRO - HONORS Same as ECO 2023 with honors content. Honors program permission required.	3	3	0	EDG 2941 INTERNSHIP EXPLORATION IN EDUCATION Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including EDF 2005 and EDG 2701 or EME 2040 and a minimum grade point average of 2.5 or departmental approval. Corequisite: EDG 2701 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. Minimum grade of C required for successful completion. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
ECO 2932 SELECTED TOPICS IN ECONOMICS For students interested in special topics that explore further the field of economics through research, discussion and observation. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		EEC 2001 INTRODUCTION TO EARLY CHILDHOOD EDUCATION An overview of early childhood development and related programs and services. Presentation will focus on historical roots, societal changes, program differentiation, and future trends. Course content and activities are designed for consistency with eligibility criteria and certification requirements of state agencies and professional associations.	3	3	0
ECO 2941 INTERNSHIP EXPLORATION IN ECONOMICS Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including (ECO 2013 or ECO 2023) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		EEX 2010 ORIENTATION TO EXCEPTIONAL EDUCATION Covers definition, characteristics, theories, current trends and controversies in various categories of exceptional education.	3	2	2
Education				EME 2040 TECHNOLOGY FOR EDUCATORS A course for undergraduate education majors which is designed to establish awareness and proficiency related to productivity tools (word processing, spreadsheet, database, graphics), multimedia presentation, hardware and software, and contemporary communications systems, such as E-mail and the World Wide Web. Generally required as a prerequisite for state university teacher education programs in Florida. Check with prospective transfer program on current requirements.	3	3	0
ARE 2002 ART AND CREATIVITY Prepares teachers/instructional personnel to integrate art and creativity into the early childhood curriculum with an emphasis on child development, the nature of children's art, creativity, artistic elements, sensory stimulation and aesthetics forms.	3	3	0	EDG 2701 TEACHING DIVERSE POPULATIONS An overview of the issues related to teaching diverse student populations. Topics include demographics, foundations of prejudice, essentials of culture, diversity and commonalities, exceptionalities, barriers to cultural understanding and valuing diversity. Included is a fifteen-hour directed field experience in a diverse educational setting. Generally required as a prerequisite for state university teacher education programs in Florida. Check with prospective transfer program on current requirements.	3	3	0
EDF 2005 INTRODUCTION TO EDUCATION General overview of teaching developed through study of processes of teaching and learning, organization and structure of American education and current issues and problems related to education. This course also incorporates a required field experience. Generally required as a prerequisite for state university teacher education programs in Florida. Check with prospective transfer program on current requirements.	3	3	0	CET 1600C CISCO NETWORKING FUNDAMENTALS Prerequisite: CET 2252C and CET 2486C or departmental approval. This course is designed to prepare a student to apply and understand the basics of networking hardware. This course covers the OSI Model and industry standards; network topologies; IP addressing, including subnet masks; and basic network design. This is the first of a four-part series designed to prepare students for the Cisco Certified Networking Associate exam. (Special Fee: \$25.00)	4	4	0
EDG 2935 SELECTED TOPICS IN EDUCATION Prerequisite: EDF 2005 or departmental approval. For students interested in special topics that explore further field of education through research, discussion and observation. May be repeated for credit, but grade forgiveness cannot be applied.	1-3	1-3	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
CET 1610C CISCO ROUTER TECHNOLOGY Prerequisite: CET 1600C or departmental approval. This course is designed to prepare a student to apply and understand the basics of networking hardware. This course covers the beginning router configurations, routed and routing protocols, and an introduction to LAN switching. This is the second of a four-part series designed to prepare students for the Cisco Certified Networking Associate exam. (Special Fee: \$25.00)	4	4	0	CET 2123C FUNDAMENTALS OF MICROPROCESSORS Prerequisite: CET 2113C or departmental approval. Introduction to basic principles of microprocessor architecture and assembly language programming. Content divided into two sections: microprocessor architecture and programming. Designed around 8085/8080A microprocessor architecture, bus architecture, memory (R/W Memory, ROM, and EPROM), and memory map. Programming includes such topics as introduction to 8085/8080A instruction set, loops, indexing, time delays, and subroutines. (Special Fee: \$25.00)	4	3	3
CET 1630C STRUCTURED WIRING Prerequisite: CET 2588 or departmental approval. This course will identify the importance of a reliable and well-designed structured cabling system for today's Local Area Networks. The content of this course will provide an introduction to data cabling; information on cabling system components; tools of the trade; an understanding of different types of media: copper cable, fiber optic, and unbounded media; identification of different types of wall plates and cable connectors; cabling system design and installation; cable connector installation; cabling system testing and troubleshooting; creation of requests for proposals (RFPs); and cabling case studies. (Special Fee: \$25.00)	4	4	0	CET 2179C A+ CONCEPTS AND PRACTICE Prerequisite: CET 2252C or departmental approval. This course is a continuation of CET 2252C. It provides the student with the knowledge and skills needed to pass the A+ examination required to become a certified computer service technician. It is designed to provide the fundamental knowledge base required to establish a career in this rapidly-changing industry. (Special Fee: \$25.00)	3	3	0
CET 2112C DIGITAL SYSTEMS I Prerequisite: MTB 1328 or MTB 1329 or departmental approval. Introductory lecture/laboratory course in computer technology. Introduces principles and techniques required for development of analysis skills in digital circuitry. Topics include computer number systems; digital codes and parity error detection methods; Boolean algebra; Karnaugh mapping; logic gate minimization techniques; arithmetic operations via combination logic gate minimization techniques; arithmetic operations via combination logic; flip-flop timing and synchronization circuits; and pulse waveform generation. Laboratory projects provide hands-on experience in use of laboratory instruments and in techniques for measurement and interpretation of digital data. (Special Fee: \$25.00)	3	3	2	CET 2252C PERSONAL COMPUTERS: MAINTENANCE, SUPPORT AND OPERATION Hands-on, laboratory-oriented course. An introductory course in maintaining microcomputer hardware and software. The course is designed to introduce the student to the operation, support and trouble-shooting of PCs. Major items covered in this course are hardware/software/firmware concepts, trouble-shooting, repair, maintenance and support of PCs; LAN/WAN networks; operating systems and application software packages; and the Internet.	3	3	1
CET 2113C DIGITAL SYSTEMS II Prerequisite: CET 2112C or departmental approval. Intermediate lecture/laboratory course in computer technology. Introduces various digital subsystems (logic assemblies) and their use in digital computing and control systems and provides analytical tools necessary to perform analyses and problem diagnoses. Topics include counter/shift register systems and applications; digital subsystems using integrated circuit logic chips encoding/decoding techniques; data interfacing and busing; multiplex/demultiplex systems; analog/digital conversion techniques; static/dynamic memory systems; and computer system organization. Laboratory projects and demonstrations provide practical insight into capabilities and limitations of alternative methods of data transfer, storage and interface conversion commonly utilized in digital computing or control system applications. (Special Fee: \$25.00)	3	3	2	CET 2485 NETWORKING ESSENTIALS Prerequisite: CET 2252C and 2486C or departmental approval. This course is designed to introduce the fundamental network concepts and terminology, OSI model, transmission media, topologies, network architectures, protocol suites, network connectivity, network operations and support. (Special Fee: \$25.00)	3	3	0
				CET 2486C LOCAL AREA NETWORKS Presents essential material useful to students with no technical data processing or electronics background. Discusses different LAN techniques and matches merits of user's requirements to meet business needs. Case studies present real situations and appropriate solutions. (Special Fee: \$25.00)	3	3	1

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
CET 2511 SUPPORTING MICROSOFT WINDOWS 9X Prerequisite: CET 2485 or departmental approval. This course focuses on supporting the Windows 9X operating system. Students will learn how to install and configure software and hardware, and to administer, implement, customize, optimize, troubleshoot, and support Windows 9X in both standalone and network environments.	4	4	0	CET 2615C CISCO ADVANCED ROUTER TECHNOLOGY Prerequisite: CET 1610C or departmental approval. This course is designed to prepare a student to apply and understand the advanced principles and applications of networking hardware. This course covers the advanced router configurations, LAN switching, network management, and advanced network design. This is the third of a four-part series designed to prepare students for the Cisco Certified Networking Associate exam. (Special Fee: \$25.00)	4	4	0
CET 2532 ADMINISTERING MICROSOFT WINDOWS NT 4.0 Prerequisite: CET 2485 or departmental approval. This course is designed to provide the student with the knowledge and skills necessary to perform the installation, administration, and configuration of software and hardware, printing, security, troubleshooting, and monitoring network resources in a Windows NT 4.0 environment. (Special Fee: \$25.00)	3	3	0	CET 2620C CISCO PROJECTS IN ROUTING DESIGN AND ADMINISTRATION Prerequisite: CET 2615C or departmental approval. This course is designed to prepare a student to apply and understand the advanced principles, applications, and implementation of networking hardware. This course covers the advanced network design projects and advanced network management projects. This is the fourth of a four-part series designed to prepare students for the Cisco Certified Networking Associate exam. (Special Fee: \$25.00)	4	4	0
CET 2535 SUPPORTING MICROSOFT WINDOWS NT 4.0 CORE TECHNOLOGIES Prerequisite: CET 2532 or departmental approval. The focus of this course is to provide the foundation skills for supporting Microsoft Windows NT 4.0. These skills are essential for installing, configuring software and hardware, customizing, optimizing, integrating, and troubleshooting Windows NT 4.0 in a single-domain network. (Special Fee: 25.00)	4	4	0	CET 2760 MICROSOFT INTERNET INFORMATION SERVER Prerequisite: CET 2785 or departmental approval. Knowledge of Web Authoring and Publishing is recommended. This course prepares students with the knowledge and skills to install and configure software and hardware and to customize, optimize, integrate, support, and troubleshoot Microsoft Internet Information Server. Topics include architecture of the server; managing the Internet Service Manager; File Transfer Protocol (FTP) service; Gopher service; World Wide Web Services; security features; and planning, encryption and authentication of the Microsoft Internet Information Server. (Special Fee: \$25.00)	3	3	0
CET 2537 SUPPORTING MICROSOFT WINDOWS NT SERVER 4.0 ENTERPRISE TECHNOLOGIES Prerequisite: CET 2535 or departmental approval. This course will provide students with the necessary skills to work with Windows NT 4.0 in an enterprise network. These skills include how to plan, design, implement, analyze, optimize, troubleshoot, and support Windows NT 4.0 Server in a single or multi-domain enterprise network. (Special Fee: \$25.00)	4	4	0	CET 2784 WIDE AREA NETWORKS Prerequisite: CET 2486C or departmental approval. Students learn principles of wide area network systems. Topics include current telephone systems architecture for voice and data. Application of standards in data switching presented as a basis for discussion of WAN digital communications. Key issues in WAN technology are defined: connection-oriented versus connection less service, synchronous versus asynchronous links, and details of frames, packets and cells in data communications. Followed by presentation of all current WAN technologies including Broadband, ISDN, X.25 packet switching, Frame Relay, SONET, SMDS, and ATM.	3	3	0
CET 2588 NETWORK PLUS Prerequisites: CET 2252C and CET 2486C or departmental approval. This course will identify the components of a LAN and determine the type of network design most appropriate for a given site; identify the different media used in network communications, distinguish between them, and determine how to use them to connect servers and workstations in a network; differentiate between the different networking standards, protocols, and access methods, and determine which would be most appropriate for a given LAN; recognize the primary network architectures, identify their major characteristics, and determine which would be most appropriate for a proposed LAN; identify the primary functions of network operating systems; determine how to implement and support the major networking components (including the server, operating system, and clients), propose a system for adequately securing data on a given LAN and protecting the system's components, and distinguish between LANs and WANs. (Special Fee: \$25.00)	4	4	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
CET 2785 TCP/IP Prerequisite: CET 2588 or departmental approval. This course provides the knowledge and skills required to set up and configure software and hardware; and use, optimize, support, and troubleshoot Transmission Control Protocol/Internet Protocol (TCP/IP) in a network environment. (Special Fee: \$25.00)	3	3	0	CET 2797 DESIGNING WINDOWS 2000 NETWORKING SERVICES INFRASTRUCTURE Prerequisite: CET 2793 or departmental approval. This course provides students with the knowledge and skills necessary to develop a networking services infrastructure design that supports the required network applications in an enterprise environment. (Special Fee: \$25.00)	4	4	0
CET 2791 WINDOWS 2000 PROFESSIONAL Prerequisite: CET 2588 or departmental approval. This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows 2000 Professional on stand-alone and client computers that are members of a network environment. (Special Fee: \$25.00)	4	4	0	CET 2930 SELECTED TOPICS IN COMPUTER ENGINEERING TECHNOLOGY Prerequisite: Departmental approval. Selected topics in computer engineering technology based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 5 hours of credit, but grade forgiveness cannot be applied.	1 - 5	variable	
CET 2792 WINDOWS 2000 SERVER Prerequisite: CET 2791 or departmental approval. This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows 2000 Server to create file, print, Web and Terminal servers. (Special Fee: \$25.00)	4	4	0	CET 2942 INTERNSHIP IN PERSONAL COMPUTER SUPPORT SERVICES Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including CET 2179C, CET 2252C, CET 2486C or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
CET 2793 SUPPORTING A NETWORK INFRASTRUCTURE USING WINDOWS 2000 Prerequisite: CET 2792 or departmental approval. This course provides students with the knowledge and skills necessary for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows 2000 Server products. (Special Fee: \$25.00)	4	4	0	CET 2943 INTERNSHIP IN NETWORK SUPPORT SERVICES Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including CET 2588, CET 2791, CET 2792 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
CET 2794 IMPLEMENTING AND ADMINISTERING MICROSOFT WINDOWS 2000 DIRECTORY SERVICES Prerequisite: CET 2793 or departmental approval. This course provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows 2000 Active Directory Services. The course also focuses on implementing Group Policy and performing the associated Group Policy tasks required to centrally manage users and computers. (Special Fee: \$25.00)	4	4	0	EET 1015C FUNDAMENTALS OF DC CIRCUITS Prerequisite: MTB 1328 or MTB 1329 or departmental approval. Fundamental course in DC electric circuits. Prepares student for EET 1025C and subsequent advanced courses. Classroom lectures supplemented with laboratory projects to provide student with hands-on experience in use of electronics test equipment and in proper techniques for data measurements/interpretation, troubleshooting and orderly documentation of test results and conclusions. (Special Fee: \$25.00)	3	2	2
CET 2795 DESIGNING WINDOWS DIRECTORY SERVICES INFRASTRUCTURE Prerequisite: CET 2794 or departmental approval. This course provides students with the knowledge and skills necessary to design a Microsoft Windows 2000 directory services infrastructure in an enterprise network. (Special Fee: \$25.00)	4	4	0				
CET 2796 DESIGNING SECURE MICROSOFT WINDOWS 2000 NETWORK Prerequisite: CET 2794 or departmental approval. This course provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks using Microsoft Windows 2000 technologies. (Special Fee: \$25.00)	4	4	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
EET 1025C FUNDAMENTALS OF AC CIRCUITS Prerequisite: EET 1015C or departmental approval. Fundamental course in AC and transient-response networks designed to prepare students for advanced courses. Classroom lectures supplemented with laboratory projects to provide student with practical hands-on experience in use of electronics test equipment and in proper techniques for data measurements/interpretation, trouble-shooting and orderly documentation of test results and conclusions. (Special Fee: \$25.00)	3	2	2	EET 2155C LINEAR OPERATIONAL AMPLIFIERS Prerequisite: EET 2142C or departmental approval. Provides detailed analysis of linear operational amplifier (OP-Amp), including transfer function response characteristics. Considers performance limitations, such as noise generation and unbalanced commonmode rejection phenomena. Examines broad range of applications including instrumentation, differentiator/integrator circuits, voltage source regulation and ripple reduction, timing circuits, function generators, active filters-digital to analog conversion, data sampling-and-hold, voltage/frequency conversion, and phase-locked loops. Laboratory projects provide students hands-on experience to supplement classroom lectures. (Special Fee: \$25.00)	4	3	3
EET 1141C SEMICONDUCTOR DEVICES AND CIRCUITS Prerequisite: EET 1025C or equivalent training in DC and AC electric circuits fundamentals. First of two-course sequence in electronic semiconductor circuits. Provides basic understanding of electronic circuits which utilize semiconductor diode and transistor circuit elements. Introduces concept of circuit simplification via idealizations, approximations and overview of semiconductor devices and their electrical properties. Emphasis on circuit analysis and various small-signal, linear and power applications utilizing diodes and transistors. Students assigned appropriate hands-on laboratory projects to expose them to practical considerations in implementing various semiconductor circuits analyzed in classroom. (Special Fee: \$25.00)	4	3	3	EET 2183C COMPUTER AND ELECTRONIC TROUBLE-SHOOTING TECHNIQUES Prerequisite: CET 2123C and EET 1141C or departmental approval. A hands-on, laboratory-oriented course on the principles, techniques, and methodologies of trouble-shooting electronic equipment, both analog and digital. Significant class and laboratory time is devoted to the understanding and trouble-shooting of digital systems. Recent generation computer equipment is used as the vehicle for learning and practicing the techniques of trouble-shooting. (Special Fee: \$25.00)	3	2	2
EET 1214C INTRODUCTION TO ENGINEERING TECHNOLOGY A course involving laboratory environment learning. Student will learn to identify electronic components, use computer circuit simulators, solder and desolder components, and use the basic lab instruments for testing and troubleshooting. Student will be required to build a kit and demonstrate functionality and workmanship. (Special Fee: \$25.00)	2	2	0	EET 2325C RF COMMUNICATION Prerequisite: EET 1141C or departmental approval. An introductory course that enables students to gain a technical working knowledge of electronic communication. It includes a broad range of topics such as AM and FM transmission and reception, transmission lines, Smith Chart, Active and Passive Filters, LC filters, SAW filters, Crystal filters, Oscillators, RF detectors, and Mixers. Classroom lectures are supplemented with laboratory projects to provide hands-on experience in the installation and theory of operation of the RF systems. (Special Fee: \$25.00)	4	3	3
EET 2142C INTEGRATED CIRCUITS Prerequisite: EET 1141C or departmental approval. Second of two-course sequence in electronic semiconductor circuits. Covers more complex applications, including field-effect transistor circuitry, amplitude/phase shift response of transistor amplifiers, integrated circuits, negative and positive feedback circuits, voltage regulators, operational amplifiers, spectrum analysis and harmonic distortion. Provides hands-on experience via assigned laboratory projects to supplement classroom lectures. Familiarity gained with array of commercial test equipment frequently used in industrial development and testing facilities. (Special Fee: \$25.00)	4	3	3	EET 2335C ELECTRONIC COMMUNICATION SYSTEMS II Prerequisite: EET 2325C or departmental approval. Emphasis on later generation system aspects of electronic communications. Includes more recently developed communication techniques, digital communication systems, transmission lines, wave propagation, antennas, waveguides and microwave hardware. May provide variations from (and additions to) scheduled topics, depending on interests of students. Classroom lectures supplemented with laboratory demonstrations and assigned projects to provide students practical insight and hands-on experience. (Special Fee: \$25.00)	4	3	3

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
EET 2365C DIGITAL/DATA COMMUNICATION Prerequisite: CET 2113C and EET 1141C or departmental approval. Covers electronic data communication including digital, fiber optics, and laser communication. Also includes coding transmission RS-232, RS-422, and IEEE-488 along with introduction to local area networks. (Special Fee: \$25.00)	4	3	3	EET 2751C TELEPHONE SWITCHING THEORY A fundamental course in telecommunications digital switching systems. Designed to prepare the student for advanced courses in state-of-the-art telecommunications. Classroom lectures are supplemented with laboratory projects to provide hands-on experience in the installation and theory of operation of the telephone systems being used in today's communication networks.	3	2	2
EET 2501 FUNDAMENTALS OF ELECTRICAL POWER DC Prerequisite: MTB 1327 or MTB 1329 or departmental approval. Principles of direct current power electricity presented with emphasis on power systems. Provides introductory understanding of generation, transmission, and distribution of power. Cable and wire selection for industrial and commercial application. Classroom lectures supplemented by field visits..	3	2	2	EET 2930 SELECTED TOPICS IN ELECTRONICS ENGINEERING TECHNOLOGY Prerequisite: Departmental approval. Selected topics in electronics engineering based on the needs and areas of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
EET 2502 FUNDAMENTALS OF ELECTRICAL POWER AC Prerequisite: EET 2501 or departmental approval. Fundamental course in alternating electrical power. Explains concepts of power flow and control. Prepares student for advanced level courses. Classroom lectures supplemented by substation, generating plant, distribution and transmission systems visits.	3	2	2	EET 2942 INTERNSHIP IN ELECTRONICS ENGINEERING TECHNOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including MTB 1327, MTB 1328, EET 1015C, EET1025C, and (CET 2112C or EET 1141C) or departmental approval. This course provides a planned work-based experience that will provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
EET 2541C POWER SYSTEMS I Prerequisite: EET 1025C or departmental approval. Details of specific issues of electrical power systems. Includes power factor, three-phase circuits, magnetic circuits and transformers. One of two courses covering components of power delivery system.	4	3	3	EST 1300 SEMICONDUCTOR MANUFACTURING TECHNOLOGY I A study of semiconductor processes, materials, and equipment used in semiconductor manufacturing. This is a theory course in semiconductor methods.	3	3	0
EET 2542C POWER SYSTEMS II Prerequisite: EET 2541C or departmental approval. Continuation of Power Systems I including power systems dispatch and economics.	4	3	3	EST 1340 STATISTICAL PROCESS CONTROL Prerequisite: MTB 1329. A study of statistical quality tools aimed to control variables of a process focusing on prevention rather than detection and with the purpose of improving the quality and productivity of the services and products. It reviews fundamental statistical tools, including frequency distributions, attributes and variable control charts, stratification analysis, acceptance sampling, operating characteristics curves and process capability studies.	2	2	0
EET 2546C POWER SYSTEMS ANALYSIS Prerequisite: EET 2542C or departmental approval. Provides understanding of behavior of power systems under normal and abnormal conditions. Explains techniques required to analyze fault currents and load flow studies.	4	3	3	EST 2305C SEMICONDUCTOR MANUFACTURING TECHNOLOGY II Prerequisite: EST 1300. A continuing study of semiconductor processes, materials, and equipment used in semiconductor manufacturing. Includes laboratory experiments. (Special Fee: \$25.00)	3	2	3
EET 2547C POWER SYSTEM PROTECTION Prerequisite: EET 2546C or departmental approval. Concentration on fuses, circuit breakers, reclosures, and relay coordination. Provides thorough understanding of protection against lightning and other abnormal conditions. Transformers, motors and generators protection is detailed.	4	3	3				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
EST 2511C ELECTRO-MECHANICAL SYSTEMS Prerequisites: PHY 1007C or PHY 1053C and EET 1141C. A study of devices and components that translate electrical energy into mechanical motion such as servo motors, stepping motors, solenoids, linear motors and actuators. (Special Fee: \$25.00)	3	2	2	EST 2942 INTERNSHIP IN MANUFACTURING TECHNOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia credit hours including EET 1015C, (CET 2113C or EET 1141C), and EST 2305C or departmental approval. This course provides a planned work-based experience to provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. (Internship Fee: \$65.00)	1 - 4	variable	
EST 2673C PROGRAMMABLE CONTROLLERS I Prerequisite: CET 2112C or departmental approval. Introduction to theory of operation of analog and digital controllers and software techniques, including math tables, logic charts, and Boolean Algebra. Particular emphasis on ladder logic diagrams, including timing functions, counters, and master control relays. Laboratory projects provide practical insights into capabilities and limitations of programmable controllers in industrial applications. (Special Fee: \$25.00)	3	2	2	ETD 2614C PRINTED CIRCUIT BOARD DESIGN Prerequisite: CET 2112C. Hands-on laboratory-oriented course. A fundamental course in printed circuit board design. Organized for students who have no previous experience in computer aided design. Classroom lectures are supplemented with laboratory projects to provide hands-on training in developing footprints and schematics for creating circuit boards.	3	1	2
EST 2674C PROGRAMMABLE CONTROLLERS II Prerequisite: EST 2673C or departmental approval. Analog and digital controllers, including P, PI, and PID algorithms, with emphasis on advanced digital controllers. Laboratory projects provide hands-on experience in developing, debugging, and executing programs and in trouble-shooting hardware problems. (Special Fee: \$25.00)	3	2	2	MTB 1327 MATHEMATICS FOR ELECTRONICS I Prerequisite: Minimum grade of C in MAT 0020C or MAT 0024C or higher-level mathematics course or departmental approval. Emphasizes electronics applications. Students solve problems in arithmetic, unit conversion, algebraic solutions of electronic circuits, network theorems and analysis-simplification methods. Students are assigned appropriate hands-on laboratory projects throughout the course.	3	3	0
EST 2700C FLUIDS AND TRANSDUCERS Prerequisites: EET 1141C and CET 2112C. A study of fluids and air logic devices as related to automated and robotics systems. Includes transducers and measurement techniques, testing and calibration, as well as repair of industrial instrumentation. (Special Fee: \$25.00)	3	2	2	MTB 1328 MATHEMATICS FOR ELECTRONICS II Prerequisite: MTB 1327 or departmental approval. Students solve problems of trigonometry of AC units, network frequency response, transient analysis, computer number systems and Boolean algebra. Students are assigned appropriate hands-on laboratory projects throughout the course.	3	3	0
EST 2750C VACUUM/RF SYSTEMS Prerequisites: EET 1141C, CET 2113C and PHY 1007C or PHY 1053C. A study of vacuum and radio frequency technologies as they apply to industrial applications. This includes gas flow, pressure regimes, gas laws, outgassing, and vacuum production. The radio frequency segments of the course will study radio frequency generation, amplification, conductors, and transducers. Emphasis will be on the installation and maintenance of vacuum and RF systems with special attention to safety practices. (Special Fee: \$25.00)	3	2	2	MTB 1329 MATHEMATICS FOR ELECTRONICS Prerequisite: Minimum grade of C in MAT0020C or MAT 0024C or a higher-level mathematics course or departmental approval. No prior electronics background is required. This applications-oriented course emphasizes mathematical techniques used in DC/AC circuit analysis. Beginning with Ohm's and Kirchoff's Law to analyze basic circuits, the student learns circuit simplifications and solution techniques for more complex configurations. Phasors and their application in AC circuits will also be covered.	3	3	0
EST 2940C MANUFACTURING PRACTICUM Prerequisite: Departmental approval. This course provides the student with the opportunity to focus on an individualized special project within the scope of the program and in conjunction with industry.	1	1	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Emergency Medical Services (EMT/Paramedic)							
To register for any of the Paramedic courses from EMS 2603 through EMS 2668 which follow, you must apply and be accepted to the Paramedic program.							
EMS 1010	3	3	0	EMS 2603	4	8	0
ESSENTIALS OF HUMAN STRUCTURE AND FUNCTION				PARAMEDIC I			
Comprehensive course presenting basic information on the structure and function of the human body. Applies principles of anatomy and physiology to show interaction of body systems as they maintain homeostasis. Each body system is presented with emphasis on the cardiovascular, respiratory and nervous systems. Course must be completed with a C or better to continue in the Paramedic Program.				Prerequisite: State of Florida Emergency Medical Technician Certification. Prerequisite or Corequisite: EMS 1010. Corequisites: EMS 2603L and EMS 2666. EMS 2603 is the first course in the sequence necessary for completion of the Paramedic Certificate curriculum. The course is designed to reinforce concepts and clinical skills learned at the EMT level and to integrate this knowledge with beginning advanced life support concepts and skills. Emphasis is placed on EMS Systems, illness and injury prevention, medical-legal issues, patient assessment, airway management and ventilation, pathophysiology, pharmacology, shock, and decision-making regarding appropriate interventions for identified problems. This course includes Modules 1,2, and 3 of the DOT National Standard Curriculum for Paramedic Programs			
EMS 1119	5	10	0	EMS 2603L	3	0	6
FUNDAMENTALS OF EMERGENCY MEDICAL TECHNOLOGY				PARAMEDIC I LABORATORY			
Corequisites: EMS 1119L and EMS 1431. Develops health professional capable of providing basic life support in all aspects of emergency medical care. Students learn assessment in medical and trauma emergencies, stabilization of illness/injury and patient transport.				Corequisites: EMS 2603 and EMS 2666. EMS 2603L is designed to reinforce concepts and clinical skills learned at the EMT level and to integrate this knowledge with beginning advanced life support concepts and skills. The laboratory exercises include a review of EMT skills, patient assessment, airway management, venipuncture/intravenous therapy, pharmacology and administration techniques. This course includes Modules 1,2, and 3 of the DOT National Standard Curriculum for Paramedic Programs. (Special Fee: \$57.00)			
EMS 1119L	3	0	6	EMS 2604	5	10	0
FUNDAMENTALS OF EMERGENCY MEDICAL TECHNOLOGY PRACTICE				PARAMEDIC II			
Corequisites: EMS 1119 and EMS 1431. Laboratory exercises emphasize patient assessment, radio communications, airway management, bandaging, splinting, CPR, methodologies of shock treatment, obstetrical assistance, extrication, MAST applications, working with cardiac monitors, setting up IVs and others. (Special Fee: \$57.50)				Prerequisites: EMS 1010, EMS 2603, EMS 2603L and EMS 2666. Corequisites: EMS 2604L and EMS 2667. EMS 2604 is the second course in the sequence necessary for completion of the Paramedic Certificate Program. The course is designed to reinforce and expand upon the materials and clinical skills learned at the EMT and Paramedic I level and to integrate prior learning with enhanced advanced life support concepts and skills. Emphasis is placed on patient assessment and recognition of significant findings, pre-hospital diagnosis and differential diagnosis, treatment strategies, anatomy and physiology, pathophysiology, trauma and the management of respiratory emergencies, cardiac emergencies, endocrine and metabolic emergencies, neurological emergencies, gastrointestinal/genitourinary emergencies, toxicological emergencies, and environmental conditions. This course includes Modules 4 and 5 of the DOT National Standard Curriculum for Paramedic Programs.			
EMS 1431	3	0	6				
EMERGENCY MEDICAL TECHNICIAN CLINICAL PRACTICUM							
Corequisites: EMS 1119 and EMS 1119L. Allows student to apply in clinical setting (emergency department and field units) skills learned in lab portion of course. (Professional liability insurance required.) (Special Fee: \$60.00)							
EMS 2525	2 - 3	variable					
ELECTROCARDIOGRAPHY							
Prerequisite: Permission of instructor. Priority given to students who require the course as a program requirement. Systematic approach to interpretation of electrocardiograms. The basic course provides an understanding of ECG rhythms, their etiologies, and treatment interventions. The focus of the course is based on electrophysiology, normal and abnormal ECG rhythms, and advanced cardiac life support pharmacology. When taken for a total of three credits, advanced skills such as 12-lead interpretation, infarct location determination, axis deviation, and conduction defects are included.							

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
EMS 2604L PARAMEDIC II LABORATORY Corequisites: EMS 2604 and EMS 2667. This course is designed to develop an EMS healthcare professional who is capable of providing Basic and Advanced Life Support (BLS and ALS) in all aspects of emergency care. During this competency-based lab, students will develop, practice and master paramedic skills. Laboratory exercises emphasize patient assessment, trauma and medical skills and treatment strategies, ECG equipment and interpretation, cardiac therapeutic interventions, application of computer skills including mega-code scenarios, trauma scenarios, medical scenarios, ECG recognition, and Advanced Cardiac Life Support resuscitative care. This course includes Modules 4, and 5 of the DOT National Standard Curriculum for Paramedic Programs. (Special Fee: \$40.00)	3	0	6	EMS 2659 PARAMEDIC IV (PROVISIONAL FIELD INTERNSHIP) Prerequisites: EMS 2605, EMS 2605L, and EMS 2668. EMS 2659 is the last course necessary to complete the Paramedic Certificate Program. Under the auspices of the medical director, this course is designed to provide the student with intensive clinical experience which fosters the development of leadership skills, expands and further develops clinical skills, and allows for the transition from observer to team leader in the professional paramedic role. Documented student participation as the team leader during a "code" must be completed during this course if these skills have not been completed during the previous out-of-hospital clinical practicum. This course includes Modules 8 of the DOT National Standard Curriculum for Paramedic Programs. (Professional liability insurance required).	5	0	10
EMS 2605 PARAMEDIC III Prerequisites: EMS 2604, EMS 2604L and EMS 2667. Corequisites: EMS 2605L and EMS 2668. EMS 2605 is the third course in the sequence necessary for completion of the Paramedic Program. The course is designed to reinforce and expand upon the materials and clinical skills learned at the EMT, and Paramedic I and II levels and to integrate prior learning with enhanced advanced life support concepts and skills. Emphasis is placed on patient assessment and recognition of significant findings, pre-hospital differential diagnosis and treatment strategies, pathophysiology, gynecologic emergencies, obstetrical emergencies, neonatal emergencies, pediatric emergencies, patients with special challenges, and assessment based management. This course includes Modules 6, and 7 of the DOT National Standard Curriculum for Paramedic Programs.	2	4	0	EMS 2666 PARAMEDIC I CLINICAL Corequisites: EMS 2603 and EMS 2603L. Practicum providing the opportunity for each student to develop competency in clinical skills within the hospital/field setting. Stresses the integration of basic computer skills, application of EMT and paramedic skills and techniques. Directed clinical experiences include emergency departments, medical examiner's office (autopsy), geriatric and mental health facilities. This course includes Modules 1,2, and 3 of the DOT National Standard Curriculum for Paramedic Programs. (Professional liability insurance required.) (Special Fee: \$80.00)	4	0	10
EMS 2605L PARAMEDIC III LABORATORY Corequisites: EMS 2605 and EMS 2668. EMS 2605L is designed to develop an health professional who is capable of providing Basic and Advanced Life Support (BLS and ALS) in all aspects of emergency care. During this competency-based lab students will develop, practice and master paramedic skills. Laboratory exercises emphasize obstetrical, and neonatal management, pediatric assessment, pediatric airway management and ventilation, intravenous and intra-osseous therapy, medication administration, Pediatric Advanced Life Support (PALS) certification, advanced vascular devices used in home health and assessment based management and operations. This course includes Modules 6, and 7 of the DOT National Standard Curriculum for Paramedic Programs (Special Fee: \$20.00)	2	0	4	EMS 2667 PARAMEDIC II CLINICAL Corequisites: EMS 2604 and EMS 2604L. Practicum providing the opportunity in hospital and out-of-hospital settings for each student to develop competency in clinical skills necessary to serve as a member of an advanced life support team. Stresses the integration of EMT and paramedic responsibilities so the student gains knowledge and confidence in clinical problem solving. Directed clinical experiences include pre-hospital, emergency departments and critical care units. This course includes Modules 4, and 5 of the DOT National Standard Curriculum for Paramedic Programs. (Professional liability insurance required.)	4	0	10
EMS 2647 ENDOTRACHEAL INTUBATION Prerequisites: EMS 1010, EMS 2603, EMS 2603L and EMS 2666 Comprehensive airway management course designed for the paramedic student, professional paramedic, respiratory therapist and registered nurse. Provides the opportunity for each student to receive physician-supervised instruction and clinical experience in endotracheal intubation. (Professional liability insurance required)	3	0	6	EMS 2668 PARAMEDIC III CLINICAL Corequisites: EMS 2605 and EMS 2605L. This practicum stresses clinical application of advanced procedures and theories in pediatrics and OB. Directed experiences will be in neonatology, obstetrics, physician mentorships, pediatric emergency departments, and clinics. Local hospitals will be utilized. This course includes Modules 6, and 7 of the DOT National Standard Curriculum for Paramedic Programs. (Professional liability insurance required)	4	0	8
				EMS 2930 SELECTED TOPICS IN EMS Designed for students interested in obtaining additional skills as EMT or paramedic. Provides clinical experience and/or didactic activities. May require student to provide professional liability insurance. May be repeated for credit, but grade forgiveness cannot be applied. (Special fee may be required.)	1 - 5	variable	

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Engineering							
EGN 111C ENGINEERING COMPUTER GRAPHICS Prerequisite: High school trigonometry. Spatial visualization, sketching and graphical presentation as a form of computerized engineering communication. Engineering drawing, descriptive geometry and graphical solution techniques using computer software.	3	2	2	EGS 2321 ENGINEERING ANALYSIS-DYNAMICS Prerequisite: EGS 2310. Prerequisite or Corequisite: MAC 2313. Kinematics and kinetics of particles and rigid bodies; mass and acceleration, work and energy, impulse and momentum.	3	3	0
EGN 2930 SELECTED TOPICS IN ENGINEERING Prerequisite: Departmental approval. Selected topics in engineering based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable		EGS 2373 PRINCIPLES OF ELECTRICAL ENGINEERING Prerequisite: PHY 2049C. Prerequisite or Corequisite: MAP 2302. This is an introductory course in electrical engineering. It provides a basis for future work in electronics, circuits, digital systems, electromechanics, and control systems. This course also provides the tools to enable the student to specify the devices for converting energy to and from electrical form.	4	4	0
EGN 2941 INTERNSHIP EXPLORATION IN ENGINEERING Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including MAC 2311 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		AML 2011 SURVEY IN AMERICAN LITERATURE: COLONIAL PERIOD TO CIVIL WAR Prerequisite: ENC 1101 or ENC 1101H. Representative authors and selections. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if AML 2010 is used to satisfy Gordon Rule and general education requirements.	3	3	0
EGS 1006 INTRODUCTION TO THE ENGINEERING PROFESSION Overview of academic and professional requirements in various engineering disciplines. Introduction to computers and application software. (Special Fee: \$25.00)	2	1	2	AML 2021 SURVEY IN AMERICAN LITERATURE: CIVIL WAR TO PRESENT Prerequisite: ENC 1101 or 1101H. Representative authors and selections. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if AML 2020 is used to satisfy Gordon Rule and general education requirements.	3	3	0
EGS 1130C DESCRIPTIVE GEOMETRY Prerequisite: ETD 1100C. Includes theory and practice in solving graphic problems involving point, line and space relationships. (Special Fee: \$25.00)	3	3	2	AML 2021H SURVEY IN AMERICAN LITERATURE: CIVIL WAR TO PRESENT - HONORS Same as AML 2020 with honors content. Honors program permission required.	3	3	0
EGS 2025 PROBABILITY AND STATISTICS FOR ENGINEERS Prerequisite: MAC 2312 and computer programming. Axioms of probability, combinatorial and geometrical probability; probability distributions; measures of location and dispersion; sampling and sampling distributions; estimations and tests of hypotheses; engineering applications.	3	3	0	CRW 2001 CREATIVE WRITING AND ADVANCED COMPOSITION Prerequisite: ENC 1101 or ENC 1101H. An interactive writing course in which students develop creative writing skills in several literary genres: short stories, poetry, plays, novels, personal essays or magazine articles.	3	3	0
EGS 2310 ENGINEERING ANALYSIS-STATICS Prerequisites: MAC 2311 and PHY 2048C. Prerequisite or Corequisite: MAC 2312. Fundamental concepts of mechanics, including resultants of force systems, free-body diagrams, equilibrium of rigid bodies, and analysis of structures.	3	3	0	CRW 2400 INTRODUCTION TO SCRIPTWRITING Prerequisite: ENC 1101 or ENC 1101H or departmental approval. Introduces scriptwriting for stage, television, and feature films. Emphasis on story development, structure, character and plot development, format, and marketing.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
ENC 0010 COLLEGE-PREPARATORY ENGLISH I Prerequisite: Appropriate score on CPT or other approved assessment. Corequisite: ENC 0010L. Referral also on basis of diagnostic writing sample. Emphasis on standard American usage and grammatically correct sentences in unified paragraph form. Minimum grade of C required for successful completion. Upon successful completion, degree-seeking student must take ENC 0012 and ENC 0012L. ENC 0010 credit does not apply toward any associate degree. (Special Fee: \$25.00)	3	3	2	ENC 1101 FRESHMAN COMPOSITION I Prerequisites: Score of 83 on writing component of CPT or equivalent score on other state-approved entry test or minimum grade of C in ENC 0012 and ENC 0012L or ENC 0012C or EAP 1640 or ENS 1441; also, score of 83 on reading component of CPT or equivalent score on other state-approved entry test or minimum grade of C in REA 0002 and REA 0002L or REA 0002C or EAP 1620 or ENS 1421. Development of essay form, including documented essay; instruction and practice in expository writing. Emphasis on clarity of central and support ideas, adequate development, logical organization, coherence, appropriate citing of primary and/or secondary sources, and grammatical and mechanical accuracy. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if ENC 1101 is used to satisfy Gordon Rule and general education requirements.	3	3	0
ENC 0010L COLLEGE-PREPARATORY ENGLISH LAB Corequisite: ENC 0010. Lab component of ENC 0010.	0	0	2	ENC 1101H FRESHMAN COMPOSITION I - HONORS Same as ENC 1101 with honors content. Honors program permission required.	3	3	0
ENC 0010C COLLEGE-PREPARATORY ENGLISH I Same as ENC 0010 and ENC 0010L with class and lab combined.	3	3	2	ENC 1102 FRESHMAN COMPOSITION II Prerequisite: Minimum grade of C in ENC 1101 or ENC 1101H. Application of skills learned in ENC 1101. Emphasis on style; use of library; reading and evaluating available sources; planning, writing, and documenting short research paper. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if ENC 1102 is used to satisfy Gordon Rule and general education requirements.	3	3	0
ENC 0012 COLLEGE-PREPARATORY ENGLISH II Prerequisite: Minimum grade of C in ENC 0010 and ENC 0010L or appropriate score on CPT or other approved assessment. Corequisite: ENC 0012L. Referral also on basis of diagnostic writing sample. Prepares students to plan and write grammatically correct paragraphs and short essays. Minimum grade of C required for successful completion. Upon successful completion, student has met the writing requirement for entry into ENC 1101. ENC 0012 credit does not apply toward any associate degree. (Special Fee: \$25.00)	3	3	2	ENC 1102H FRESHMAN COMPOSITION II - HONORS Same as ENC 1102 with honors content. Honors program permission required.	3	3	0
ENC 0012L COLLEGE-PREPARATORY ENGLISH LAB Corequisite: ENC 0012. Lab component of ENC 0012.	0	0	2	ENC 1133L RESEARCH WRITING LAB Designed to increase proficiency in effective methods of doing library research and writing documented essay using computer-generated word processing. Elective credit. Does not apply toward general education requirements.	1	0	2
ENC 0012C COLLEGE-PREPARATORY ENGLISH II Same as ENC 0012 and ENC 0012L with class and lab combined.	3	3	2	ENC 1210 TECHNICAL COMMUNICATION Prerequisite: ENC 1101 or ENC 1101H. Emphasis on clear, simple and precise English. Writing of business letters, office memos, technical reports, proposals and recommendations. Practice in collecting and organizing data and preparing report formats. Includes oral reports and interview techniques.	3	3	0
ENC 0013L COMMUNICATIONS SKILLS REVIEW LAB Designed to increase efficiency in writing skills, including word choice, sentence structure, grammar, spelling, punctuation, and process of writing an essay. Elective credit. Does not apply toward general education requirements. (Special Fee: \$25.00)	1	0	2	ENC 2302 ADVANCED CREATIVE WRITING - LITERARY MAGAZINE Prerequisite: ENC 1101 or ENC 1101H or departmental approval. Writing in genre of student's choice. Literary criticism and production of College literary magazine.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
ENG 2100 INTRODUCTION TO FILM Techniques of American, British, and foreign-language films. Emphasis on films of '30s through contemporary cinema.	3	3	0	LIT 2120 SURVEY IN WORLD LITERATURE: ENLIGHTENMENT TO PRESENT Prerequisite: ENC 1101 or ENC 1101H. Major poetry, fiction, drama and essays. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if LIT 2120 is used to satisfy Gordon Rule and general education requirements.	3	3	0
ENG 2930 SELECTED TOPICS IN ENGLISH Special topics in writing and/or literature. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		LIT 2120H SURVEY IN WORLD LITERATURE: ENLIGHTENMENT TO PRESENT Same as LIT 2120 with honors content. Honors program permission required.	3	3	0
ENG 2941 INTERNSHIP EXPLORATION IN COMMUNICATIONS (PUBLIC RELATIONS) Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including ENC 1101 or ENC 1101H and (JOU 1101 or MMC 1000 or MMC 2100) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		English as a Second Language for Academic Purposes			
ENL 2012 SURVEY IN ENGLISH LITERATURE: 1300-1800 Prerequisite: ENC 1101 or ENC 1101H. British literature through 18th century. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if ENL 2012 is used to satisfy Gordon Rule and general education requirements.	3	3	0	EAP 0281 HIGH BEGINNING COMBINED SKILLS FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency. Students develop sufficient elementary skill in English used for academic purposes to understand high-frequency vocabulary in oral contexts and respond to simple questions and phrases. Additionally, they will comprehend basic academic-level text, express themselves on personal topics in writing, develop control of basic grammatical structures, and use computer-assisted language learning facilities. Competencies: 1) elementary academic speaking/listening skills, 2) basic reading and vocabulary skills, 3) guided discourse writing skills, 4) basic grammatical structures and patterns, and 5) basic skill in using language learning software. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	6	6	0
ENL 2022 SURVEY IN ENGLISH LITERATURE: 1800 TO PRESENT Prerequisite: ENC 1101 or ENC 1101H. British literature of 19th and 20th centuries. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if ENL 2022 is used to satisfy Gordon Rule and general education requirements.	3	3	0	EAP 0300 LOW INTERMEDIATE SPEECH FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0281. Students develop speaking and listening skills necessary for participating in classroom discussions, with an emphasis on clarification through rewording and asking questions. Competencies: 1) basic academic speaking/listening skills, 2) classroom interaction skills, and 3) introduction to critical listening skills and strategies. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	3	3	0
LIT 2090 CONTEMPORARY LITERATURE Prerequisite: ENC 1101 or ENC 1101H. Representative works of contemporary poets, novelists, short story writers, dramatists, and non-fiction writers especially significant in the last thirty years. Emphasis on issues and ideas related to present and future. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if LIT 2090 is used to satisfy Gordon Rule and general education requirements.	3	3	0				
LIT 2090H CONTEMPORARY LITERATURE - HONORS Same as LIT 2090 with honors content. Honors program permission required.	3	3	0				
LIT 2110 SURVEY IN WORLD LITERATURE: BEGINNING THROUGH RENAISSANCE Prerequisite: ENC 1101 or ENC 1101H. Major poetry, fiction, drama, and essays. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if LIT 2110 is used to satisfy Gordon Rule and general education requirements.	3	3	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
EAP 0320 LOW INTERMEDIATE READING FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0281. Students develop the ability to read text on familiar and basic academic topics with an emphasis on vocabulary expansion and application of critical reading skills. Competencies: 1) developing base-line English vocabulary, 2) locating key concepts, 3) reading and understanding, and 4) understanding and using information resources. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	3	3	0	EAP 0400 INTERMEDIATE SPEECH FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0300. Students continue to develop speaking and listening skills necessary for participation in classroom discussions, with an introduction to oral presentation and critical listening skills. Competencies: 1) academic speaking/ listening skills, 2) introduction to oral presentations, and 3) critical listening skills and strategies. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	3	3	0
EAP 0340 LOW INTERMEDIATE COMPOSITION FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0281. Prerequisite or corequisite: EAP 0360. Students develop the ability to write basic structured academic paragraphs on familiar topics and execute other academic writing tasks. Competencies: 1) select a topic and appropriate pre-writing technique, 2) develop a topic sentence, 3) select basic support, 4) write the first draft of a paragraph, 5) edit for errors, 6) produce a final paragraph, and 7) write a letter. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on both the editing and essay writing parts of the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	3	3	0	EAP 0420 INTERMEDIATE READING FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0320. Students develop ability to comprehend longer texts of limited length and difficulty on a variety of academically-related topics. Competencies: 1) improving English vocabulary, 2) locating key concepts, 3) reading and understanding, 4) understanding and using information resources, and 5) reading for personal enrichment. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	3	3	0
EAP 0360 LOW INTERMEDIATE STRUCTURE FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0281. Students develop the ability to use low intermediate-level grammatical structures appropriate to classroom discussion, oral presentations, and writing of academic paragraphs, with an emphasis on increased accuracy. Competencies: 1) controlling verbs, 2) forming questions, 3) using nouns and noun phrases, 4) using prepositions, 5) using a variety of sentence types, and 6) developing some editing ability. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	3	3	0	EAP 0440 INTERMEDIATE COMPOSITION FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grades of C in EAP 0340 and EAP 0360. Prerequisite or corequisite: EAP 0460. Students develop the ability to write more sophisticated structured academic paragraphs in various rhetorical modes and execute other academic writing tasks. Competencies: 1) select and limit a topic and choose an appropriate pre-writing technique, 2) develop a topic sentence, 3) select and organize appropriate support, 4) write a first draft of the paragraph, 5) use cohesive devices, 6) edit the first draft of the paragraph, 7) produce a final one-paragraph essay, 8) recognize basic paragraph development from reading selections, and 9) execute other academic writing tasks. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on both the editing and essay writing parts of the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
EAP 0460 INTERMEDIATE STRUCTURE FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0360. Students develop the ability to use intermediate-level grammatical structures appropriate to classroom discussion, oral presentations, and writing of more sophisticated academic paragraphs, with an emphasis on increased accuracy. Competencies: 1) controlling verbs, 2) using nouns and noun phrases effectively, 3) forming questions, 4) using subordinate clauses, 5) using a variety of sentence types, 6) using prepositions and phrasal verbs, and 7) developing editing ability. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam. Credit does not apply toward any associate degree.	3	3	0	EAP 1540 HIGH INTERMEDIATE COMPOSITION FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grades of C in EAP 0440 and EAP 0460. Prerequisite(s) or corequisite(s): EAP 1520 unless exempted from EAP 1520 and EAP 1560 unless exempted from EAP 1560. Students develop the ability to write basic, structured, academic essays with an emphasis on accuracy and cohesiveness and execute other academic writing tasks. Competencies: 1) select and refine a topic and utilize an appropriate pre-writing technique, 2) develop a topic sentence or thesis statement, 3) support the topic sentence or thesis statement, 4) construct an organizational plan/pattern, 5) write an introductory paragraph, 6) write a body paragraph, 7) write a concluding paragraph, 8) write the first draft of the paragraph or essay, 9) revise the paragraph or essay, 10) edit for grammatical and mechanical errors, 11) produce a final multi-paragraph essay, 12) recognize elements of effective writing from reading selections in the disciplines, and 13) execute other academic writing tasks. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on both the editing and essay writing parts of the Comprehensive Departmental Final Exam.	3	3	0
EAP 1500 HIGH INTERMEDIATE SPEECH FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0400. Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion, with an introduction to lecture note taking. Competencies: 1) academic communication skills, 2) extemporaneous speech preparation and delivery, and 3) academic lecture note taking. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam.	3	3	0	EAP 1560 HIGH INTERMEDIATE STRUCTURE FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0460. Students develop the ability to use complex grammatical structures appropriate to effective academic presentations, discussions, and essays, at this level. Competencies: 1) controlling verbs, 2) selecting and using dependent clauses, 3) using nouns and noun phrases, 4) using a variety of sentence types, 5) improving editing ability, 6) recognizing predicate requirements of verbs, and 7) identifying grammatical constructions in readings from various disciplines. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam.	3	3	0
EAP 1520 HIGH INTERMEDIATE READING FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 0420. Prerequisite or corequisite: EAP 1540 unless exempted from EAP 1540. Students develop ability to comprehend longer texts on a variety of academically-related topics by applying appropriate reading strategies. Competencies: 1) improving English vocabulary, 2) locating key concepts, 3) reading critically, 4) reading for information in periodicals, 5) reading to enhance personal life, and 6) developing effective study habits. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam.	3	3	0	EAP 1616 ADVANCED SPEECH FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Demonstration of required level of English proficiency or minimum grade of C in EAP 1500. Students further develop communication skills necessary for full participation in mainstream college classes, including comprehension of extensive discourse. Competencies: 1) mainstream academic communication skills, 2) extemporaneous and impromptu academic oral presentations, 3) academic lecture and extensive discourse comprehension, and 4) academic oral/aural skills refinement for college success. Required lab work is a homework component of this course. In order to pass this course, students must earn a grade of C or better in course work and a passing score on the Comprehensive Departmental Final Exam.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
EAP 1620 ADVANCED READING FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Minimum grades of C in EAP 1520 and 1540 or eligibility for ENC 0012 and REA 0002 and departmental approval. Corequisite: EAP 1640 unless exempted from EAP 1640. Students develop ability to comprehend and interpret authentic college-level texts in content areas by applying appropriate reading strategies. Competencies: 1) improving English vocabulary, 2) locating key concepts, 3) reading critically, 4) reading for study and enjoyment, and 5) reading multi-media/hypertext material effectively. Lab work of two hours per week is a required component of this course. In order to pass this course, students must earn a grade of C or better in course work and lab work and a passing score on the Comprehensive Departmental Final Exam. (Special Fee: \$25.00)	3	3	2	EVS 1143 WATER TREATMENT II Prerequisite: EVS 1133 or Florida certificate level C in water treatment or equivalent. Provides in-depth look at water treatment process begun in treatment plant operations. Covers treatment systems typical of larger operations and, because of their more complex nature, places greater concentration on chemical and biological aspects of treatment. Stresses study of issues and techniques small-plant managers and first line supervisory personnel need to become familiar with. Provides instruction necessary for Florida B level certification in water treatment.	3	3	0
EAP 1640 ADVANCED COMPOSITION FOR NON-NATIVE SPEAKERS OF ENGLISH Prerequisite: Minimum grades of C in EAP 1520 and 1540 or eligibility for ENC 0012 and REA 0002 and departmental approval. Corequisite: EAP 1620 unless exempted from EAP 1620. Students develop the ability to write a variety of college-level essays with sophistication, fluency and accuracy and execute other academic writing tasks. Competencies: 1) narrow a broad topic, 2) select an appropriate pre-writing technique, 3) develop a thesis statement, 4) support the thesis, 5) construct an organizational plan/pattern, 6) write an introductory paragraph, 7) write body paragraph(s), 8) write a concluding paragraph, 9) write the first draft of the essay, 10) revise the essay, 11) edit for grammatical errors, 12) edit for mechanical errors, 13) produce a final multi-paragraph essay, 14) identify elements of effective writing from reading selections in the disciplines, and 15) perform other academic writing tasks. Lab work of two hours per week is a required component of this course. In order to pass this course, students must earn a grade of C or better in course work and lab work and a passing score on both the editing and essay writing parts of the Comprehensive Departmental Final Exam. (Special Fee: \$25.00)	3	3	2	EVS 1333 WASTEWATER TREATMENT I Provides theoretical and practical knowledge necessary for Florida C level certification in wastewater treatment. Includes material relating to areas of microbiology, mathematics, problem-solving, mechanical maintenance and repair, record keeping and operational safety relevant to operations.	3	3	0
EAP 2930 SELECTED TOPICS IN ENGLISH AS A SECOND LANGUAGE Prerequisite: Departmental approval. Selected topics in English as a second language based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable		EVS 1343 WASTEWATER TREATMENT II Prerequisite: EVS 1333 or Florida certification level C in wastewater or equivalent. In-depth look at wastewater process begun in EVS 1343. Covers treatment systems typical of larger operations and, because of their more complex nature, places a greater concentration on biological aspects of treatment. Also stresses study of issues and techniques with which small-plant managers and first-line supervisors need to become familiar. Provides the instruction necessary for Florida B level certification in wastewater treatment. Eight contact hours.	3	3	0
				EVS 1861C ENVIRONMENTAL POLICY, REGULATIONS, AND PERMITTING Covers the formulation of environmental policy and the regulations and permitting decisions that policy generates. Includes the study of regulatory agencies at federal, state, and local levels. Laboratory experiences explore practical applications of environmental regulations. (Special Fee: \$25.00)	4	3	3
				EVS 2005 WATER AND WASTEWATER SYSTEMS Prerequisite: Two years of high school algebra with a minimum grade of C or MAT 0020C or MAT 0024C. Provides an understanding of the technology used in municipal water supply and wastewater disposal. Includes fundamentals of hydraulics and hydrology unique to sanitary studies. Includes lecture, lab and field trip experiences.	3	3	0
Environmental Science Technology				EVS 2010C NATURAL AREAS USES Prerequisite: PCB 1440. A variety of topics will be covered including human uses of natural resources and associated impacts, the history of the conservation movement and sustainability. Lab will cover techniques and materials used to communicate about these topics with the public in natural settings.	3	2	3
EVS 1133 WATER TREATMENT I Provides theoretical, technical and practical knowledge necessary for Florida C-level certification for water treatment. Surveys all plant processes, specific knowledge needed to safely operate processing units and applied training in operation and maintenance of solution-feed gas chlorination systems.	3	3	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
EVS 2153 WATER TREATMENT III Prerequisite: EVS 1143 or Florida certificate level B in water treatment or equivalent. Provides theoretical and technical knowledge necessary for Florida A level certification in water treatment. Directed towards individual who has achieved C or B levels of certification in two main areas; managing treatment plant operations and advanced and innovative treatment techniques. Material offered using problem-solving approach, in which students find their own solutions to problems and critique them as to practicality in costs, labor, materials, and safety considerations.	3	3	0	EVS 2930 SELECTED TOPICS IN ENVIRONMENTAL SCIENCE Prerequisite: Departmental approval. Selected topics in environmental science based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
EVS 2191 ENVIRONMENTAL SAMPLING AND ANALYSIS Prerequisite: CHM 1025C or equivalent. Lecture/lab/field course includes proper methods of collecting, transporting and analyzing samples of water, wastewater, air, and soil. Stresses techniques for data analysis and presentation.	3	3	0	EVS 2941 INTERNSHIP EXPLORATION IN ENVIRONMENTAL SCIENCE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including BSC 1050 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
EVS 2353 WASTEWATER TREATMENT III Prerequisite: EVS 1343 or Florida certification level B in wastewater or equivalent. Provides information in advanced wastewater treatment. Covers treatment of larger operations along with advanced effluent disposal and sludge treatment handling. Stresses importance of proper supervisory techniques in personnel, budget preparation, and setting and conducting training programs. Provides instruction necessary for Florida A level certification in wastewater treatment.	3	3	0	EVS 2942 INTERNSHIP IN ENVIRONMENTAL SCIENCE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including BSC 1050 or departmental approval. This course provides a planned work-based experience that will provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
EVS 2601 HAZARDOUS MATERIALS Prerequisite: CHM 1025C. Lecture/field course includes principles of safe handling, classification and management of hazardous materials. Students learn basic provisions of important regulation programs such as RCRA, SARA and OSHA.	3	3	0	Film You must apply and be accepted to the Film Production Technology A.S. Degree program to register for any of the following film courses: FIL 2200C, FIL 2271, FIL 2272, FIL 2273, FIL 2274, FIL 2275.			
EVS 2840C NATURAL AREAS MANAGEMENT PRACTICES I Prerequisite: PCB 1440. Students will become familiar with the principles of hydrology and ecosystem restoration, particularly the restoration of wetlands. This course will be taught as a series of field labs that may last for several days. Much of the work will be in outdoor locations. Schedules and locations to be arranged by instructor. (Special Fee: \$25.00)	4	3	3	FIL 1270 INTRODUCTION TO THE FILM PROCESS Study of film-making process from concept to completion with special emphasis on relationship between various job categories and specific role of "below-the-line" production technician.	3	3	0
EVS 2841C NATURAL AREAS MANAGEMENT PRACTICES II Prerequisite: PCB 1440. Students will become familiar with the principles of the management of exotic species and management of ecosystems through the use of prescribed fire. This course will be taught as a series of field labs that may last for several days. Much of the work will be in outdoor locations. Schedules and locations to be arranged by instructor. (Special Fee: \$25.00)	4	3	3	FIL 2100 SCREENWRITING Introduction to the basic techniques of screenwriting and storyboarding. Exercises in story structure, dialogue and character development. Introduction to screenwriting and storyboarding computer software. (Special Fee: \$25.00)	3	2	1
				FIL 2200C FILM PRODUCTION Participation by student as technician in College-sponsored film production. Must be repeated for 12 hours credit, but grade forgiveness cannot be applied. (Special Fee: \$425.00)	1 - 4	variable	

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
FIL 2201 MOTION PICTURE PRODUCTION I Provides a basic understanding of film production technology, equipment operation, terminology and techniques. Students may incur additional production expenses. (Special Fee: \$25.00)	3	2	2	FIL 2930 SELECTED TOPICS IN FILM Seminar for students interested in research, discussion and observation of special topics in film and film production. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
FIL 2203 MOTION PICTURE PRODUCTION II Prerequisite: Minimum grade of C in FIL 2201 or departmental approval. Corequisite: FIL 2211. Develops creative and organizational skills needed for motion picture production. Requires participation in a motion picture project. Students may incur additional production expenses. (Special Fee: \$25.00)	3	2	2	FIL 2942 INTERNSHIP IN FILM TECHNOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; completion of the limited access portion of the Valencia Film Production Technology Program or departmental approval. This course provides a planned work-based experience that will provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
FIL 2211 MOTION PICTURE EDITING AND POST-PRODUCTION Prerequisite: Minimum grade of C in FIL 2100 or departmental approval. Corequisite: FIL 2203. Student develops the skills and techniques required to edit a narrative motion picture. (Special Fee: \$25.00)	3	2	2	Finance			
FIL 2271 FILM CAMERA TECHNIQUES Prepares student to function in all capacities as member of motion picture camera department. Focuses on care and handling of equipment, documentation and solving film-shooting problems.	3	1	3	BRC 2001 PRINCIPLES OF FINANCE A study of business finance in the American economy, money, monetary systems, monetary standards, flow of funds, sources of funds, money markets, capital markets, savings, channeling savings into investments, corporate financial structures, financing large businesses, financing small businesses, financing real estate, public finance, fiscal policies, international finance, and international financial policies.	3	3	0
FIL 2272 FILM LIGHTING Study of film lighting techniques, practices and equipment. Includes lighting theory, power distribution systems and color theory. Special emphasis on working as part of film production team.	3	1	3	BRC 2941 INTERNSHIP EXPLORATION IN FINANCE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including GEB 1011 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
FIL 2273 FILM GRIPPING Study of use of gripping skills and equipment as related to feature film production. Emphasis on strategies necessary to anticipate shooting needs and problem-solving.	3	1	3	BRC 2942 INTERNSHIP IN FINANCE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including GEB 1011, FIN 2612 or departmental approval. This course provides a planned work-based experience that will provide students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
FIL 2274 FILM EDITING Acquaints students with techniques and aesthetics of film editing. Emphasis on visual and audio post-production.	4	1	3	FIN 1611 BASICS OF INTERNATIONAL BANKING AND FINANCE An introduction to the role of banks in international finance. The course examines the role of banks in international transactions, how money is transferred among banks dealing in international finance, letters of credit, foreign exchange and the various instruments banks utilize to spread risk.	1	1	0
FIL 2275 FILM SOUND Focuses on theory and practice of production and post-production film sound. Special emphasis on techniques of sound imaging in film-making process.	4	1	3				
FIL 2400 HISTORY OF MOTION PICTURES Overview of film as an industry, mass medium and art form.	3	3	0				

Course	Cr	Cls	Lab	Course	Con	Voc	
FIN 2010 PERSONAL INVESTMENTS Introduction to securities markets, types of personal investments, research tools, investment strategies and portfolio management.	3	3	0	FFP 2200 INTRODUCTION TO FIRE INSPECTION Structure and organization of fire prevention organizations; conducting inspections, interpreting and applying code regulations; study of procedures and techniques of fire prevention, including surveying and mapping, recognition and elimination of fire hazards; fire risk analysis as applied to municipal and industrial occupancies; problems of public relations, including coordination with other agencies, public education, inspection practices.	3	3	0
FIN 2100 PERSONAL FINANCE Introduction to personal financial planning, including personal financial management, taxes, risk management, investments, retirement planning and estate planning.	3	3	0	FFP 2300 BUILDING CONSTRUCTION AND FUNDAMENTALS Study of components of structures from fire protection standpoint with emphasis on effects of fire on structures and fire protection through built-in fire safety measures.	3	3	0
Fire Science Technology				FFP 2315 FIRE PROTECTION CODES AND STANDARDS Study of origin, development and application of Fire Protection Codes and Standards with emphasis on Life Safety Code. Reading, interpreting and applying Life Safety Code for purpose of code enforcement primary accent of course.	3	3	0
FFP 1130 COMPANY OFFICER LEADERSHIP Includes basic aspects of leadership: leadership style, communications, group dynamics, individual behavior, motivation and various types of management currently used.	3	3	0	FFP 2326 PLANS REVIEW FOR FIRE SCIENCE Study of building plans and prints to determine compliance with code. Prepares student for plans review from fire prevention standpoint using Life Safety Code. Consideration of types of building construction and how they affect fire and life safety.	3	3	0
FFP 1410 FIRE FIGHTING STRATEGY AND TACTICS I Basic concepts of fire fighting, size-up, fire attack principles, use of manpower and equipment at company level. Emphasis on developing thinking skills in working with common fires and operations to ensure success at more serious ones.	3	3	0	FFP 2500 HAZARDOUS MATERIALS I Study of principles involved in recognition of materials hazardous because of combustibility, toxicity, reactivity or other properties, special information and requirements; chemical and physical properties of various forms of matter, their possible interaction related to storage, transportation and handling; theories of combustion and extinguishment; properties of matter affecting fire behavior; explosive and unstable materials and strategies and techniques for fire control.	3	3	0
FFP 1811 FIRE FIGHTING STRATEGY AND TACTICS II Prerequisite: FFP 1410. This course covers multiple company operations, logistics, strategy, use of mutual aid forces and conflagration control. The course is intended for officers who may be in command of fires and other emergencies involving close coordination and maximum use of large amounts of manpower and equipment. Typical tactical situations and case histories are given. The development of critical thinking skills is stressed. This course also incorporates a required lab experience.	3	3	0	FFP 2501 HAZARDOUS MATERIALS II Problems of hazardous materials in transportation, storage and use. Additional emphasis on emergency services in combating, coordinating and controlling hazardous materials incident. Covers bulk storage of hazardous materials and their transportation by land, sea and air.	3	3	0
FFP 2111 FIRE CHEMISTRY This course is designed to show the Fire Officer the different forms of matter and energy, common substances and how they relate to fire. The chemical formulas of flammable and combustible substances, their bonding and separations, as well as the different chemical reactions related to fire and oxidation are covered. Particular emphasis is placed on the specific substances used by arsonists to ignite and accelerate burning. (Special Fee: \$25.00)	3	3	0				
FFP 2150 FIRE SERVICE INSTRUCTOR I Principles, procedures and techniques of teaching with emphasis on methods of instruction, developing training outlines, use of visual aids and testing procedures for fire technology instructors.	3	3	0				

Course	Con	Voc	Course	Con	Voc		
FFP 2531 INTRODUCTION TO FIRE AND LIFE SAFETY EDUCATION This course is designed to provide the public educator with the knowledge and skills needed to perform successfully as a fire and life safety educator as addressed in NFPA 1035. Designed for those who practice the multidiscipline profession of fire and life safety educator (including uniformed fire service personnel and other professionals). Topics include fire behavior, community assessment, injury prevention and juvenile firesetting. The student also will develop presentation skills and learn how to formulate public education programs. This course meets the national certification criteria for Fire and Life Safety Education, Level I. This course also incorporates a required field experience.	3	3	0	FFP 2741 FIRE SERVICE INSTRUCTOR II This course covers the principles of effective curriculum design. It stresses the principles of adult learning and student-centered learning. Designing courses and units that address learning, performance, and behavioral objectives is the program goal.	3	3	0
FFP 2541 FIRE PROTECTION SYSTEMS II Prerequisite: FFP 2620 or departmental approval. This course explores pre-engineered and portable systems, extinguishing agents, inspection procedures for code compliance enforcement, and alarm systems. It examines the components of a fire protection system. This course also incorporates a required field experience.	3	3	0	FFP 2780 FIRE DEPARTMENT ADMINISTRATION This course is designed to present the principles of management theory and their application in the fire service. The course is intended for fire officers whose areas of responsibility encompass long and short range planning, budgeting and administration.	3	3	0
FFP 2610 FIRE INVESTIGATION: CAUSE AND ORIGIN Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in investigative process. Deals with determination of fire cause and origin, collection of evidence and investigator's preparation for trial.	3	3	0	FFP 2813 INCIDENT COMMAND This course emphasizes an understanding of the command skills needed by the departmental officers to use the ICS system effectively. Emphasis also is placed on guidelines and resource information for setting up and implementing a departmental ICS. This course also incorporates a required lab experience.	3	3	0
FFP 2620 FIRE PROTECTION SYSTEMS AND EXTINGUISHING AGENTS Study of importance and proper use of fire detection and suppression systems. Advising public concerning agents and systems; review of design, installation, maintenance and inspection requirements of applicable standards dealing with systems.	3	3	0	FFP 2930 SELECTED TOPICS IN FIRE SCIENCE Prerequisite: Departmental approval. For students interested in discussion and exploration of selected topics in fire technology. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
FFP 2670 LEGAL AND ETHICAL ISSUES FOR THE FIRE SERVICE This course deals with the entire spectrum of issues facing today's fire service leaders. Topics include: labor relations, human rights and diversity, conflicts of interest, and frameworks for decision-making.	3	3	0	FFP 2941 INTERNSHIP EXPLORATION IN FIRE SCIENCE Prerequisites: Satisfactory completion of required college-preparatory courses; completion of 12 Valencia college-level credit hours or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences through a supervised practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
FFP 2706 PUBLIC INFORMATION OFFICER This course prepares the student to serve effectively as an organizational spokesperson, according to current practices in the profession of public relations and numerous examples from the fire service. Particular emphasis will be placed on case studies in crisis communications and the Public Information Officer's role in the Incident Command System. This course also incorporates a required field experience.	3	3	0	FFP 2942 INTERNSHIP IN FIRE SCIENCE Prerequisites: Satisfactory completion of required college-preparatory courses; completion of 12 Valencia college-level credit hours and departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
				French			
				FRE 1000 BASIC FRENCH Proficiency approach to French. Stress on everyday use of the language. Students introduced to basic grammar, vocabulary and composition. This course, two years of recent high school French or permission of professor is prerequisite for FRE 1100. Not recommended for native speakers.	3	3	0

Course	Con	Voc	Course	Con	Voc
FRE 1100 ELEMENTARY FRENCH I Prerequisite: FRE 1000, two years of recent high school French or departmental approval. Fundamental French grammar and communication skills.	3	3	0		
FRE 1101 ELEMENTARY FRENCH II Prerequisite: FRE 1100 or departmental approval. Study of grammar and extensive conversation. Includes limited compositions based on selected readings from French publications.	3	3	0		
FRE 2200 INTERMEDIATE FRENCH I Prerequisite: FRE 1101 or departmental approval. Emphasis on integration of communications skills- conversation, reading and composition.	3	3	0		
FRE 2201 INTERMEDIATE FRENCH II Prerequisite: FRE 2200 or departmental approval. Emphasis on integration of communication skills-oral presentations based on reading and composition.	3	3	0		
FRE 2930 SELECTED TOPICS IN FRENCH For students interested in special topics that further explore the field of French. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable			
FRE 2941 INTERNSHIP EXPLORATION IN FRENCH Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including a foreign language course at the intermediate level or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable			
Geography					
GEA 1000 WORLD GEOGRAPHY Introduction to basic geographic concepts and terms, problems of conservation of natural resources and human and natural resources of major regions of world with in-depth study of one or more countries in each region.	3	3	0		
Geology					
GLY 1001 EARTH SCIENCES Study of earth sciences with emphasis on geology. Additional topics selected from astronomy, oceanography and meteorology. Emphasis on Florida.	3	3	0		
GLY 2010C PHYSICAL GEOLOGY Deals with physical structure of earth. Includes effects of volcanic activity, glaciation, diastrophism (formation of major crustal features; continents; ocean beds, folds, faults, and mountain building), tectonics (structural deformation and readjustment of crust), sediments, erosional features, rock and mineral formation along with new and current geological developments. (Special Fee: \$25.00)	4	3	3		
GLY 2100C HISTORICAL GEOLOGY History of the earth and the evolution of life as evidenced in the rock and fossil record; principles of geologic and paleontologic research; evolution of the dinosaurs, mass extinctions, and effects of the past continental movements on the diversity of life. (Special Fee: \$25.00)	4	3	3		
GLY 2100H HISTORICAL GEOLOGY - HONORS Same as GLY 2100C with honors content. Honors program permission required. (Special Fee: \$25.00)	4	3	3		
GLY 2930 SELECTED TOPICS IN GEOLOGY Prerequisite: Departmental approval. Selected topics in geology based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable			
German					
GER 1000 BASIC GERMAN Conversational approach to German. Stress on everyday use of the language. Students introduced to basic grammar, vocabulary and composition. This course, two years of recent high school German or departmental approval prerequisite for GER 1100. Not recommended for native speakers.	3	3	0		
GER 1100 ELEMENTARY GERMAN I Prerequisite: GER 1000, two years of recent high school German or departmental approval. Fundamental German grammar and communication skills.	3	3	0		
GER 1101 ELEMENTARY GERMAN II Prerequisite: GER 1100 or departmental approval. Continuation of GER 1100.	3	3	0		
GER 2200 INTERMEDIATE GERMAN I Prerequisite: GER 1101 or departmental approval. Conversational approach based on material which also develops reading and writing skills.	3	3	0		

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
GER 2201 INTERMEDIATE GERMAN II Prerequisite: GER 2200 or departmental approval. Conversational approach based on material which also develops reading and writing skills.	3	3	0	GEY 2602 PROBLEMS OF AGING This course is designed to provide students an understanding of the principles of assessment and the skills needed to assess the elder's changing health status. Emphasis is placed on the nutritional requirements of the elder. The major categories of pharmacologic agents are explored to identify what effect they have on the health of the aging client. There is a required clinical component.	3	2	1
GER 2930 SELECTED TOPICS IN GERMAN For students interested in special topics that further explore the field of German. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		Graphics Technology			
GER 2941 INTERNSHIP EXPLORATION IN GERMAN Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including (a foreign language course at the intermediate level) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		GRA 1142 DIGITAL MEDIA AND DESIGN An introduction to a variety of visual communication principles, methods and careers in today's computer age. Typography, design, layout, color, production, and an introduction to an industry-standard personal computer and software for production of graphics and multimedia all are explored. (Special Fee: \$25.00)	5	5	2
Gerontology To register for any of the Gerontology courses, you must have at least an Associate in Arts or an Associate in Science Degree or the equivalent as determined and approved by the Health-Related Programs Department Chair.				GRA 1530C FUNDAMENTALS OF TYPOGRAPHY Prerequisite: GRA 1142 or departmental approval. Includes the history and classification of type. Contemporary type usage will be explored. Projects in type design and production include the use of a personal computer and industry-standard software. (Special Fee: \$25.00)	3	3	1
GEY 2000 PASSAGES IN AGING This course is designed for professionals who are interested in working with older adults in any care setting. This course will provide information on attitudes, trends and theories of aging. A major component of this course places emphasis on cognitive and emotional changes in the elder population. Strategies to care more effectively for the elder experiencing physical, cognitive or emotional distress will be presented. There is a required clinical component.	3	2	1	GRA 1540C LAYOUT, DESIGN AND COPY PREPARATION Prerequisite: GRA 1142 or departmental approval. A practical course in planning and visualizing advertising and industrial copy. The student converts rough ideas and designs into comprehensive layouts from which are prepared traditional and computerized camera-ready copy. Experiments are conducted with various media involving design, balance and color psychology. (Special Fee: \$25.00)	3	2	2
GEY 2321 POLITICS, POWER AND PROGRAMS FOR AGING This course will focus on policies and legislation affecting those aged 60 plus in the U.S. Students will be introduced to specific problems of the elder and the student will identify processes of planning to solve those problems through community programs for the elder. Emphasis will be placed on identification of the legal and ethical issues confronting the elder and potential individual community solutions. There is a required clinical component.	3	2	1	GRA 1835 DIGITAL VIDEO AND SOUND Prerequisite: GRA 2577 or departmental approval. Advanced tools and techniques will be taught enabling students to produce sophisticated digital video and sound presentations according to client or audience needs and capabilities. Understanding of digital video and sound creation, editing and presentation will be covered. (Special Fee: \$25.00)	3	3	1
				GRA 1836 INTRODUCTION TO COMPUTERS AND LOGICAL THINKING Provides instruction in methods of logical thought and critical thinking. Employs in-class projects, demonstrations and group activities designed to enhance students' logical thought processes. Students become familiar with historical and modern tools used to employ critical thinking and basic computer programming skills. (Special Fee: \$25.00)	2	2	1

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
GRA 1951 PORTFOLIO REVIEW Prerequisite: ART 1201C and ART 1301C and GRA 2577 and SLS 1303 or departmental approval. A course in which the student develops a portfolio and presentation skills for employment in the graphic design or multimedia profession. Additionally, students design a personal letterhead for their interview request letter, a business card and a self-promotional piece. As final evaluation for the course, students undergo a portfolio review.	1	2	0	GRA 2801 ADOBE ILLUSTRATOR Prerequisite: GRA 1142 or departmental approval. A course covering the concepts of electronic publishing and the ability to create and manipulate full color graphic illustrations. Students will receive training on Adobe Illustrator or the most current Encapsulated Postscript illustration program standard in the industry. Class lecture will be supported with hand-outs and demonstrations. (Special Fee: \$25.00)	3	3	1
GRA 2545C ADVANCED GRAPHIC DESIGN I Prerequisite: GRA 1540C or departmental approval. Addresses practical problems relevant to contemporary industry standards in graphic communications. Emphasis on producing layouts and comprehensives in black and white and color. Various up-to-date methods of camera-ready production utilized.	3	1	2	GRA 2803 COMPUTER ANIMATION I Prerequisite: GRA 1142 or departmental approval. Instruction in the use of a personal computer to generate 2-D images and incorporate them into animated sequences. Principles of traditional animation, storyboarding and animation effects will be explored and applied to computer imagery. Students will become familiar with the necessary hardware and software to create and output animated images. (Special Fee: \$25.00)	3	2	2
GRA 2546C ADVANCED GRAPHIC DESIGN II Prerequisite: GRA 2545C or departmental approval. Comprehensive course involving in-depth study of advanced design problem solving. Includes marketing strategies, exploring design solutions, dealing with clients, estimating costs, presentation and production techniques.	3	1	2	GRA 2804 COMPUTER ANIMATION II Prerequisite: GRA 2803 or departmental approval. Continuation of GRA 2803. Students will complete more advanced 2-D imagery and incorporate those into animated sequences. Also explores the application and usage of 3-D imagery in animation. (Special Fee: \$25.00)	3	2	1
GRA 2577 ADOBE PHOTOSHOP Prerequisite: GRA 1142 or departmental approval. A course in the graphic applications of Adobe Photoshop designed for the experienced publisher, graphic designer or graphic arts person who wishes to integrate black and white and color photography into their page layout program. Program features will be utilized to create original bitmapped images, edit scanned images and import images rendered in other applications through a variety of built in painting, editing and correction tools. Additionally, students will learn the basics of retouching, color correction, pre-proofing and printing to various devices. (Special Fee: \$25.00)	3	3	1	GRA 2805 3-D MODELING Prerequisite: GRA 1836 and GRA 2803 or departmental approval. Students learn to work in a 3-D environment to generate graphics and short, animated sequences. Projects emphasize 3-D modeling skills including data construction, applying attributes and lighting. An introduction to 3-D animation also will be given. (Special Fee: \$25.00)	3	3	1
GRA 2635C GRAPHIC REPRODUCTION PROCESSES Prerequisite: GRA 1540C or departmental approval. Fundamentals of single and multi-color layout and prepress production will be introduced. Traditional production techniques and current usage of a personal computer, software and peripherals will be studied. Course includes lecture and field trips to local graphic arts production and printing facilities. (Special Fee: \$25.00)	3	3	1	GRA 2807 ADVANCED IMAGE EDITING Prerequisite: GRA 2577 or departmental approval. Exploration of advanced image processing techniques. Students will learn how to prepare images for various output venues, including print, web and multimedia publishing, animation and video. Projects focus on resolution, color management, image and texture creation, and special effects. Industry-standard hardware and software will be utilized. (Special Fee: \$25.00)	3	3	1
GRA 2743C ILLUSTRATING Prerequisites: GRA 1142 and ART 1301C or departmental approval. A basic course in the application of freehand sketching to commercial problems. Various surfaces and techniques, as well as color and black and white mediums will be explored. Also included are studies in planning, production and completion of finished artwork. (Special Fee: \$25.00)	3	2	2	GRA 2820 DESKTOP PUBLISHING Prerequisite: GRA 1142 or departmental approval. Designed to provide students with hands-on usage of desktop publishing software and hardware currently used in the industry for the production of quality publications. A focus on good graphic design skills will include: composition, layout, typography, pagination, style, balance, format and project planning. (Special Fee: \$25.00)	3	3	1

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
GRA2830 MULTIMEDIA GRAPHICS I Prerequisite: GRA2577 or departmental approval. Students learn advanced graphic techniques for multimedia presentations. Vector and bit-mapped graphics software will be used to complete the projects. Students learn to plan and create presentations that could include scanned imaged, images created in various graphics programs, video and animation sequences and sound. (Special Fee: \$25.00)	3	3	1	Health, Health and Fitness, and Physical Education			
GRA 2832 MULTIMEDIA GRAPHICS II Prerequisite: GRA 2830 or departmental approval. Students learn advanced techniques to produce interactive multimedia presentations. Students design a presentation through various steps of development, implementation, testing and final output. Special attention is given to scripting, design considerations for output media and system configurations. Vector and bit-mapped graphics software, video, sound and authoring software will be utilized. (Special Fee: \$25.00)	3	3	1	HLP 1081 HEALTH ANALYSIS AND IMPROVEMENT I This course combines aerobics, strength training, and wellness principles. The student is helped to design a personal fitness program which includes regular workouts. Lectures are once a week and topics covered include nutrition, stress, strength training principles, muscle development, and weight control.	3	1	3
GRA 2841 WEB PAGE DESIGN Prerequisite: GRA 2577 or departmental approval. Provides instruction in the most current applications being used in the industry for production of web pages. Proper coding of the pages with consideration of various platforms will be provided. Special emphasis on good design, proper usage of typography and images for delivery on the Internet will be covered. (Special Fee: \$25.00)	3	3	1	HLP 1082 HEALTH ANALYSIS AND IMPROVEMENT II Prerequisite: HLP1081. This course is a continuation of the HLP1081 maintenance component. Students may also review and write research papers on the following topics: wellness, cardiovascular exercise, strength conditioning, stress management, body composition, nutrition, disease prevention, and health promotion through exercise intervention. May be repeated for credit, but grade forgiveness cannot be applied.	1	0	3
GRA 2842 ADVANCED WEB PAGE DESIGN Prerequisite: GRA 1836 and GRA 2841 or departmental approval. Advanced tools and techniques will be taught enabling students to produce sophisticated, interactive web sites according to audience needs and capabilities. Understanding of web site maintenance and administration will be covered. (Special Fee: \$25.00)	3	3	1	HLP 2930 SELECTED TOPICS IN HEALTH AND FITNESS Prerequisite: Departmental Approval. Selected topics in health and fitness as background and interests of students dictate. May be repeated for credit, providing different topics are explored. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
GRA 2930 SELECTED TOPICS IN GRAPHIC ARTS Prerequisite: Departmental approval. In-depth study of various advanced concepts, methods and techniques currently employed in graphic arts field. Explores state-of-the-art applications through research, experimentation, discussion and demonstration. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3			HSC 1100 PERSONAL HEALTH Acquaints individual with sound principles of healthful living. Emphasis on helping student meet physical, mental and social stresses of daily life. Topics include nutrition, physical conditioning, mental health, reproduction, diseases pertinent to today's lifestyle and alcohol and drug education.	3	3	0
GRA 2942 INTERNSHIP IN GRAPHICS Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including GRA 2577 and SLS 1303 or permission of professor. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		HSC 1400 FIRST AID/CPR Acquaints students with principles of first aid/CPR in daily living and emergency procedures for cases of unexpected illness or injury. Students may earn standard first aid and cardiopulmonary resuscitation (CPR) certification.	3	3	0
				PEL 1121 GOLF I Basic fundamentals pertaining to grip, stance, posture and swing. Work with woods, irons, chipping and putting. Discussions on rules of play, etiquette and purchase and care of equipment. Emphasizes recreational and carry-over values of golf. (Special Fee: \$25.00)	2	2	0
				PEL 1321 VOLLEYBALL I Designed for casual or intramural participants interested in improving skills of forearm pass, set, spike, dink, block and overhead serve. Covers rules and game strategy. (Special Fee: \$25.00)	2	2	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
PEL 1341 TENNIS I Designed specifically for beginning tennis player. Body movements, positioning, footwork and stroke techniques introduced and related to forehand drive, backhand drive, fore and backhand volley and serve. Practical playing experience teaches rules, etiquette and some strategy. Equipment furnished. (Special Fee: \$25.00)	2	2	0	PEL 2622 BASKETBALL II For students with intermediate and/or advanced skills. Review of basic fundamental skills and emphasis on advanced development of skills and strategies. (Special Fee: \$25.00)	2	2	0
PEL 1342 TENNIS II For students developing advanced skills of good tennis player. Introduces lob, overhead and drop shot; emphasizes advanced development of fundamental strokes. Practical playing experience aids in teaching strategy. Students enrolling need better-than-average tennis form for ground strokes, volley, and serve. Playing experience suggested. (Special Fee: \$25.00)	2	2	0	PEM 1012 FITNESS FOR THE DISABLED Individualized fitness program geared to student's capabilities; strength and aerobic training in independent workouts. (Special Fee: \$25.00)	1-2	1-2	0
PEL 1441 RACQUETBALL I Introduces student to fundamental skills needed to enjoy racquetball. Basic strokes, footwork, body movement and positioning in conjunction with court etiquette and rules. (Special Fee: \$25.00)	2	2	0	PEM 1131 WEIGHT TRAINING AND CONDITIONING I Designed to improve strength and appearance with the use of weight training machines, rope jumping, walking, jogging, circuit training, isotonic and isometric exercises. Emphasis is on fitness and proper conditioning techniques. (Special Fee: \$25.00)	2	2	0
PEL 1621 BASKETBALL I Designed for casual or intramural participants interested in improving skills of shooting, passing and catching, dribbling and rebounding. Also covers rules and offensive and defensive team strategy. (Special Fee: \$25.00)	2	2	0	PEM 1132 WEIGHT TRAINING AND CONDITIONING II Prerequisite: PEM 1131 or departmental approval. For students interested in developing advanced skills in weight training, rope jumping, walking, jogging, circuit training, isotonic and isometric exercises. Emphasis is on the use of advanced fitness and conditioning activities to improve strength and maintain health. (Special Fee: \$25.00)	2	2	0
PEL 2122 GOLF II Review of basic fundamentals. Advanced skills and emphasis on play and tournaments. Open to any student with departmental approval. (Special Fee: \$25.00)	2	2	0	PEM 1171 DANCE AEROBICS Program of physical fitness based on popular aerobic exercises choreographed to music. Individual exercise programs designed for people of all ages. (Special Fee: \$25.00)	2	0	2
PEL 2322 VOLLEYBALL II For students with intermediate and/or advanced offensive and defensive skills. Review of basic fundamental skills and emphasis on advanced development of fundamental skills and strategies. (Special Fee: \$25.00)	2	2	0	PEM 1405 SELF-DEFENSE FOR WOMEN Practical self-defense techniques designed for women. Techniques do not require strength but rely on dynamics of motion. Designed to increase awareness of danger and develop protective responses. Develops self-confidence and self-esteem. (Special Fee: \$25.00)	2	2	0
PEL 2343 TENNIS III Specialized instruction with emphasis on techniques and strategy used in competitive play. Open to any student with departmental approval. (Special Fee: \$25.00)	2	2	0	PEM 1441 KARATE I Application and understanding of learned techniques in "Empty Hand Way" (Karate Do). Emphasizes basic movement skills, safety regulations, rules and basic oriental terminology related to sport. (Special Fee: \$25.00)	2	2	0
PEL 2442 RACQUETBALL II For students developing advanced skills of a good racquetball player. Emphasizes advanced development of fundamental strokes and introduces overhead, ceiling ball, z-shot. Practical playing experience aids in teaching techniques and strategy. Open to all students with departmental approval. (Special Fee: \$25.00)	2	2	0	PEM 2442 KARATE II Prerequisite: Departmental approval. For students who wish to attain skills in various forms of kata while performing fundamentals of Karate Do in complex patterns of simulated defensive situations. (Special Fee: \$25.00)	2	2	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
PEM 2443 TAE KWON DO Application and understanding of learned skills in "Tae Kwon Do". Emphasis basic movement skills, safety regulations, rules, basic moral cultural values, and terminology related to the art. (Special Fee: \$25.00)	2	2	0	HSC 2550 PATHOPHYSIOLOGY Prerequisite: BSC 2093C or departmental approval. Concepts of disease and related pathology. Manifestations and etiology of pathological conditions, their relevance to diagnosis and treatment of diseases, trauma, systemic classifications, tissue disruptions and healing process.	3	4	0
PEN 1136 SCUBA TRAINING Prerequisite: Basic swimming ability and good health. An introduction to the proper techniques of safe scuba diving. (Special Fee: \$67.50)	2	2	0	HSC 2930 SELECTED TOPICS IN HEALTH SCIENCE Prerequisite: Departmental approval. Selected topics in health science based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
PEO 1323 VOLLEYBALL OFFICIATING Designed for beginning and advanced participants interested in improving their knowledge of volleyball rules, officiating techniques, game situations, and practical procedures. (Special Fee: \$25.00)	2	2	0	HSC 2941 INTERNSHIP EXPLORATION IN HEALTH Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits which may include the following recommended courses (HSC 1001, HSC 1531, BSC 1010C or PSY 1012). This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
PET 2622 CARE AND PREVENTION OF ATHLETIC INJURIES An introduction to the prevention, identification, care and rehabilitation of activity-related injuries. Training will include taping techniques. (Special Fee: \$25.00)	3	3	0	PHY 1002 APPLIED PHYSICS General principles of physics applied in lecture course. Study of atomic theory and structure, electrostatics, electrodynamics, magnetism, electromagnetism, electric generators and motors, production and control of high voltage, rectification, circuitry, electromagnetic radiation, and interaction of radiation with matter.	3	3	0
PET 2930 SELECTED TOPICS IN PHYSICAL EDUCATION Selected topics in physical education as background and interests of students dictate. May be repeated for credit, provided different topic explored each time, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	1 - 3	variable					

Health-Related

HSC 1001 PROFESSIONS OF CARING Prerequisite: Completed remedial course work. Introduces careers in health professions. Includes self exploration and increased awareness of self and others. Focuses on American Health Care Systems and skills and understanding needed to enter health professions.	3	3	0
HSC 1230C METHODS OF PATIENT CARE Introduces basic theories, skills, and techniques of quality patient care. Includes communication, assessment skills, aseptic technique, venous access and drug administration, emergency situations and AIDS education. Presents theoretical and practical knowledge to make sound clinical judgments and carry out patient care activities. (Special Fee: \$60.00)	2	1	3
HSC 1531 MEDICAL TERMINOLOGY Study of language of medicine and allied health specialties. Includes word construction, definitions and application of terms.	3	3	0

Course	Con	Voc
--------	-----	-----

High-Tech Training for Individuals with Disabilities

COMPUTER ASSISTED DESIGN AND DRAFTING and PC SUPPORT SPECIALIST

Vocational Credits

To register for any of the High-Tech Training for Individuals with Disabilities courses, you must apply and be accepted to a High-Tech Training Program

CGS 0570 MICROCOMPUTER FUNDAMENTALS AND APPLICATIONS Business Applications provides an overview of the entire field of data processing. This course covers such topics as manual and automatic record keeping, types of computers, a brief history of computing devices, data representation, computer components and stored program concepts.	45	1.5
--	----	-----

Course	Con	Voc	Course	Con	Voc
EEV 0531 COMPUTER ARCHITECTURE Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. This course provides an in-depth study of computer systems including: mother boards, power supplies, system interrupts, OMA and local area networks. Emphasis is placed on system trouble-shooting. Course content will prepare the student for the A+ Certification exam.	140	4.5	EEV 0554 NETWORKING FUNDAMENTALS Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. This course is designed to prepare the student to apply and understand the basics of networking hardware. The course covers the OSI (Open Systems Interconnections) Model and industry standards; network topologies; IP addressing, including subnet masks; and basic network design. Course content will prepare the student for the Network+ Certification exam.	135	4.5
EEV 0535 COMPUTER SOFTWARE AND INTERFACING Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. This course covers installation techniques, customer relations and requirements, and software programming in basic, machine and assembler. Emphasis is placed on customer requirements and operating diagnostic software. Course content will prepare the student for the A+ Certification exam.	140	4.5	ENC 0030 TECHNICAL COMMUNICATIONS Emphasis on clear, simple and precise English. Writing of business letters, office memos, technical reports, proposals and recommendations. Practice in collecting and organizing data and preparing report formats. Includes oral reports and interview techniques.	45	1.5
EEV 0538 COMPUTER PERIPHERALS AND INTERFACING Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. This course presents an in-depth study of computer peripherals and the interface circuitry that controls them. Trouble-shooting and repair to disk drive, monitor displays, keyboards, and printers are emphasized. Course content will prepare the student for the A+ Certification exam.	140	4.5	ETD 0081 INTRODUCTION TO MANUAL DRAFTING Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. A survey course of the principles and practices involved in making and reading engineering drawings. Emphasis is placed on lettering, industrial symbolism, visualization, orthographic projection and line techniques.	30	1.0
EEV 0550 NETWORK TECHNOLOGIES Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. This course covers the concepts of networking from the basics of networking concepts to the specifics of networking technologies. Contents include history of computer networks, data translation, transmission, network structures, communication and protocols. Course content will prepare the student for the Network+ Certification exam.	134	4.5	ETD 0321 INTRODUCTION TO AUTOCAD Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. Introduction to the use of the CAD and AutoCAD applications for business, engineering, graphics, and personal use. Topics covered include the history of computer aided design and drafting. AutoCAD instruction emphasizes skills and competencies necessary to function in systems drafting environment. Includes keyboard commands, menu, printer/plotter, input devices, computer terminology and systems operation. Provides hands-on experience to create, save and retrieve drawings having various shapes, line types, dimensions and layers.	130	4.5
EEV 0552 NETWORKING ESSENTIALS Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. This course is designed to introduce the student to all aspects of the networking field. It covers the basics of networking, the functionality of the OSI model, media, topologies, and more. The student will be expected to understand the fundamental concepts of networking. Course content will prepare the student for the Network+ Certification exam.	135	4.5	ETD 0328 INTRODUCTION TO MICROSTATION Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. Emphasizes skills and competencies necessary to function in systems drafting environment. Includes keyboard commands, menu, printer/plotter, input devices, computer terminology and systems operation. Provides hands-on experience to create, save and retrieve drawings having various shapes, lines, types, dimensions and levels. MicroStation software will be used in this course.	60	2.0

Course	Con	Voc	Course	Con	Voc
ETD 0332 AUTOCAD CUSTOMIZATION This course offers advanced concepts in the modification of the AutoCAD program to enhance productivity for business, engineering, and personal use. Topics covered include the modification of the ACAD.PGP file, creating menus and macros and creating AutoLisp routines. This course requires expert knowledge of the AutoCAD program.	63	2.0	GEB 0211 COMMUNICATIONS/PROFESSIONAL SKILLS This course provides practice in developing effective oral and written business communication skills to create successful human relations. Emphasis is placed on written and oral business correspondence, including an extensive segment developed to guide and assist individuals in developing the skills that will allow them to secure employment in their trained profession. The curriculum is developed so that individuals will gain realistic job-seeking skills. Therefore, emphasis is placed on developing the self-confidence, self-assurance and empowerment of students in relation to the job search. The business community assists in bringing effective realistic techniques or methods to the classroom, as well as inviting the students into the business community to learn first-hand what it takes to get a job and keep a job.	56	2.0
ETD 0350 ADVANCED AUTOCAD Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. Provides the experienced CAD student the opportunity to approach detailed and intricate drafting and design problems from a computer perspective. Hands-on-experience is provided in creating custom menus, slides, text fonts, live types, attributes, extractions, 3-D drawings and rotations. Course also will provide the experienced CAD student with advanced three dimensional concepts needed for drawing and editing 3-D wireframe or surface models. Creating and orienting 3-D faces, along with geometric considerations, will be taught.	246	8.0	MTB 0320 TECHNICAL MATHEMATICS I The presentation of key concepts of technical mathematics as they relate to computing, business and personal use. Topics include use of the calculator, on-line mathematics programs, algebra, and trigonometry. The continuation of technical math in the senior CADD lab includes selected concepts of calculus required for computer aided design.	45	1.5
ETD 0356 ADVANCED MICROSTATION Prerequisite: Successful completion of Business Applications Lab (BAL) curriculum. The course teaches the student to create 3-D design and cell files. It provides instruction for constructing and manipulating 3-D figures. The course also introduces the student to the hidden line removal capability of MicroStation. The course consists of classroom lectures and hands-on lab time.	92	3.0	MTB 0322 TECHNICAL MATHEMATICS II Continuation of Technical Mathematics I that further covers concepts of technical mathematics as they relate to computing, business and personal use. Topics include the use of calculators, online mathematics, algebra, trigonometry, and selected concepts of calculus required for computer aided design.	63	2.0
ETD 0370 SELECTED GRAPHIC APPLICATIONS Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. This course covers introduction of selected graphic applications including 3D Studio and AutoDESK Animator.	30	1.0	OCA 0311 MICROSOFT WORD FOR WINDOWS Covers word processing functions of this software in the Windows environment. All features, beginning to advanced, of the program are included.	60	2.0
ETD 0530 INTERMEDIATE DRAFTING CONCEPTS/TECHNIQUES Prerequisite: Successful completion of Foundation Courses (Business Applications Core) or departmental approval. Provides the experienced CAD student the opportunity to approach detailed and intricate drafting and design problems from a computer perspective. Hands-on experience is provided in creating custom menus, slides, text fonts, live types, attributes, extractions, 3-D drawings and rotations. Course also will provide the experienced CAD student with advanced three-dimensional concepts needed for drawing and editing 3-D wireframe or surface models. Creating and orienting 3-D faces, along with geometric considerations, will be taught. The use of the principles of design and the history of design also will be presented to assist students in the step-by-step procedures to problem solving for business, engineering, graphics, and personal use. Topics covered include the history of design, principle of design, team approaches, individual design project including both written and oral presentation. The project includes analysis of selecting the appropriate design and market considerations.	110	3.5	OCA 0501 MICROSOFT OFFICE (APPLICATIONS PACKAGE) This course explains the basic principles of the Microsoft Office Applications Package and its use in business. Students will learn to use Word for creating and editing word processing documents; Excel for creating, modifying and charting spreadsheet data; Access for creating, appending, editing, and manipulating data in a database program; and PowerPoint for creating a professional slide show presentation. The course also will include basic Windows functions, such as manipulating Windows and using File Manager.	65	2.0

Course	Con	Voc	Course	Cr	Cls	Lab
OCA 0701 MICROSOFT WINDOWS (OPERATING SYSTEM) Covers the basic principles of computers and their use in business. Students get hands-on experience using Windows. Article reviews on current operating systems will be discussed and compared. Operating system features such as the clipboard, file management/explorer, and accessories will be discussed. Also will provide an introduction to Local Area Networks as used in business and manufacturing environments. Topics covered include LAN topologies, network interfaces, file servers, network operating software, and LAN installation and management.	45	1.5	EUH 2000 WESTERN CIVILIZATION TO 1750 Prerequisite: Minimum grade of C in ENC 1101 or ENC 1101H. Survey of ancient, medieval and early modern Western civilization, with emphasis on political, social and economic developments. Examines early societies of Mesopotamia and Egypt, Greece, Roman Republic and Empire, early Christianity, barbarian invasions, medieval government and commerce, Renaissance and Reformation, origins of modern state and other topics. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if EUH 2000 is used to satisfy Gordon Rule requirement.	3	3	0

OTA 0102 COMPUTER KEYBOARDING Instruction in touch system of alphabetic and numeric keyboarding on computer. Skills can be used on computer and electronic terminals.	15	.5
---	----	----

Course	Cr	Cls	Voc
--------	----	-----	-----

History

AMH 2010 UNITED STATES HISTORY TO 1877 Survey of early United States history, emphasizing political, social, and economic developments. Examines such topics as colonization, slavery, American Revolution, U.S. Constitution, War of 1812, emancipation movement, Civil War and Reconstruction.	3	3	0
--	---	---	---

AMH 2010H UNITED STATES HISTORY TO 1877 - HONORS Same as AMH 2010 with honors content. Honors program permission required.	3	3	0
--	---	---	---

AMH 2020 UNITED STATES HISTORY 1877 TO PRESENT Survey of United States history from the Gilded Age to the present, emphasizing political, social, and economic developments. Examines such topics as expansion, Populist and Progressive movements, Great Depression, the World Wars, reform and dissent in the 1960's and the Vietnam conflict.	3	3	0
--	---	---	---

AMH 2020H UNITED STATES HISTORY 1877 TO PRESENT - HONORS Same as AMH 2020 with honors content. Honors program permission required.	3	3	0
--	---	---	---

AMH 2070 HISTORY OF FLORIDA Creates an understanding of and appreciation for historical evolution of Florida. Emphasizes direct student involvement in compiling and collecting documents, artifacts, photographs, slides, tapes, papers, etc.	3	3	0
--	---	---	---

EUH 2001 WESTERN CIVILIZATION 1750 TO PRESENT Prerequisite: Minimum grade of C in ENC 1101 or ENC 1101H. Survey of modern Western society, with emphasis on industrialization, social developments, rise of modern state and international relations. Examines French and Russian revolutions, Fascist Italy, Nazi Germany and World Wars I and II and other topics. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if EUH 2001 is used to satisfy Gordon Rule requirement.	3	3	0
--	---	---	---

HIS 2206 RECENT AND CONTEMPORARY HISTORY Creates understanding of political, social, economic, intellectual and ideological forces prevalent in postwar world through study and analysis of recent and contemporary national and international problems.	3	3	0
--	---	---	---

HIS 2935 SELECTED TOPICS IN HISTORY For students interested in special topics and who wish to explore further field of history through research, discussion and observation. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable
---	-------	----------

Horticulture Technology

AOM 2012 TYPES AND SYSTEMS OF AGRICULTURAL OPERATIONS Study of operational and management styles utilized in agricultural (horticultural) situations. Emphasis on process of systems development, administrative definition, product research and development, service and maintenance, machinery and equipment needs and application, operational analysis for purchasing, communications, transportation, production, and marketing. Lab experiences will include field trips to horticulture concerns for systems analysis.	3	3	1
--	---	---	---

BOT 2501 PLANT PHYSIOLOGY Study of vital phenomena in plants. Concerns processes and functions, responses of plants to changes in environment, and growth and development that result from responses. Laboratory experiences make applications to biological concepts and to practical aspects of all phases and areas of horticulture.	4	3	2
---	---	---	---

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
ENY 1002C PRINCIPLES OF ENTOMOLOGY Prerequisite: HOS 1010 or departmental approval. Discussion of major plant insect pests, their characteristics, identification, life cycles and type of injury inflicted and analysis of various control measures including cultural, biological and chemical methods. Includes pesticides, methods of application and precautions in handling. (Special Fee: \$25.00)	3	3	1	HOS 2942 INTERNSHIP IN ORNAMENTAL HORTICULTURE TECHNOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including HOS 1010, ORH 1510, BOT 2501, SOS 2102, AOM 2101 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
FRC 2211L CITRUS CULTURE Prerequisite: HOS 1010. Deals with citrus production and marketing. Includes study of such practices as propagation, planting, pruning, cultivating, fertilizing, spraying, irrigating, harvesting, grading, storing and marketing. Includes one-hour laboratory. (Special Fee: \$25.00)	3	3	1	IPM 1301 PESTICIDES Involves classification, mode of action, toxicity, mixing, registration and safe application techniques of pesticides used in pest control industry.	3	3	1
HOS 1010 INTRODUCTION TO HORTICULTURAL SCIENCE Study of scientific basis of horticulture for beginning students. Part I introduces biology of horticulture; Part II deals with techniques of horticulture; Part III surveys industry, emphasizing distinguishing characteristics and special problems. Includes aesthetic aspects of horticulture. Lab periods cover such practices as pruning, propagation, plant classification. (Special Fee: \$25.00)	3	3	1	ORH 1234 ORNAMENTAL PLANT MAINTENANCE Prerequisite: HOS 1010 or departmental approval. Analysis of basic principles and practices used in plant maintenance of designed areas. Considers both preventive and normal maintenance measures. Provides comprehensive survey of design and maintenance problems with emphasis on institutional and public areas. (Special Fee: \$25.00)	4	3	2
HOS 2030 HORTICULTURAL EQUIPMENT Operation, safety and maintenance of hydraulic tools for tree and shrub pruning; welding equipment for facility and equipment repair; irrigation equipment for home and commercial use; lawn and turf equipment for construction and maintenance. (Special Fee: \$25.00)	2	2	1	ORH 1510 ORNAMENTAL PLANT MATERIALS I Prerequisite: HOS 1010 or departmental approval. Detailed study of temperate zone plants used in Florida landscaping. Includes identification, growth characteristics, propagation, culture and uses of plants. (Special Fee: \$25.00)	3	3	1
HOS 2932 SELECTED TOPICS IN HORTICULTURE Prerequisite: HOS 1010. Topics of interest or research in horticulture. May be repeated for credit, but grade forgiveness cannot be applied. (Special fee may be required)	1 - 4			ORH 1511 ORNAMENTAL PLANT MATERIALS II Prerequisite: HOS 1010 or departmental approval. Identification, growth characteristics, propagation, culture and use of tropical and sub-tropical plants in Florida plantscapes. (Special Fee: \$25.00)	3	3	1
HOS 2941 INTERNSHIP EXPLORATION IN AGRI-BUSINESS Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including BSC 1010 C or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		ORH 1831 LANDSCAPING-DESIGN AND IMPLEMENTATION Prerequisite: ORH 1510 or departmental approval. Comprehensive study of design elements, design principles, culture and technique. Includes plan preparation, evaluation, presentation and implementation of functionally designed areas. (Special Fee: \$25.00)	3	3	1
				ORH 1873 INTERIORSCAPING-DESIGN AND MAINTENANCE Prerequisite: ORH 1511 or departmental approval. Comprehensive study of design elements and principles as applied to interior situations and conditions. Emphasis on preparation, evaluation and implementation of functionally designed areas. Maintenance procedures and practices discussed in detail. (Special Fee: \$25.00)	3	3	1

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
ORH 2220 TURF GRASS CULTURE Prerequisites: HOS 1010 and SOS 2102 or departmental approval. Detailed study of turf grass varieties and their establishment, maintenance and renovation. Emphasis on physiology, soil-water relationships, nutrition, pests and their control and sod production. (Special Fee: \$25.00)	4	3	2	ORH 2930 HORTICULTURE RESEARCH AND SEMINAR Prerequisite: Departmental approval. For students wishing to become involved in primary research. Research-seminar project conducted under strict supervision by qualified professors. Using accepted procedural format, representative of the agricultural research community. Research performed will be given to Horticulture classes involved in the subject matter areas being researched.	1 - 3	variable	
ORH 2251 NURSERY OPERATION AND MANAGEMENT Prerequisite: HOS 1010 or departmental approval. Study of management and cultural practices. Includes laboratory work in time-motion studies, production scheduling, marketing surveying, nursery design, nursery visitations, nursery personnel, cost analysis, cultural approaches, growing structures and equipment use. (Special Fee: \$25.00)	3	3	1	PLP 2001C PLANT PATHOLOGY Prerequisite: HOS 1010 or departmental approval. Deals with more common and important diseases of horticultural plants. Discusses symptoms, life history of causal organisms and treatments of diseases. Analysis of biological, physical and chemical approaches. (Special Fee: \$25.00)	4	3	2
ORH 2260 GREENHOUSE OPERATIONS AND MANAGEMENT Prerequisite: HOS 1010. Study of producing plants under transparency. Includes greenhouse management; heating, cooling and humidity control; culture practices of growing foliage and other house plants with regard to propagation, pest control; plant acclimatization and marketing. (Special Fee: \$25.00)	3	3	1	PLS 2220 PLANT PROPAGATION Prerequisite: HOS 1010 or departmental approval. Comprehensive study of methods and practices used for propagating plant materials in industry today. Includes study and practice in seedage, layerage, cuttage, graftage, budding and micro-propagation.	3	3	1
ORH 2261 FLORI-CROP PRODUCTION AND USE Prerequisite: HOS 1010 or departmental approval. Basic concepts of commercial greenhouse construction, maintenance and environmental control techniques. Major emphasis on production, management and marketing of major floral crops. (Special Fee: \$25.00)	3	3	1	PMA 2502 DIAGNOSTIC TECHNIQUES FOR PLANT PROBLEMS Study of procedures and methodologies used by horticultural industry, both research and commercial, to accurately identify plant cultural problems, such as pathogenic, non-pathogenic, entomological, and environmental. Lab experience includes field trips to private industry labs, collecting samples and analyzing problems, and introduction to state-of-the-art equipment used by both industry and research facilities.	4	3	2
ORH 2274 COMMERCIAL FOLIAGE PLANT PRODUCTION Prerequisite: HOS 1010 or departmental approval. Comprehensive study of commercial foliage production. Major topics of discussion: identification, classification, growing structures, culture, production, pest control and marketing. (Special Fee: \$25.00)	4	3	2	SOS 2102 SOILS AND FERTILIZERS Prerequisite: HOS 1010 or departmental approval. Study of soil-water-plant relationships. Emphasis on soil properties (soil science), soil management and soil use (economical as well as social). Includes nursery and greenhouse soils for Florida, elemental nutrient studies and selected research topics. (Special Fee: \$25.00)	3	3	1
ORH 2281 INTRODUCTION TO ORCHIDOLOGY Prerequisite: HOS 1010 or departmental approval. Survey of taxonomy, morphology, ecology and culture of the orchid family. Emphasis upon cultural aspects for Central Florida. (Special Fee: \$25.00)	3	2	2	VEC 1201 INTRODUCTION TO VEGETABLE GARDENING Prerequisite: HOS 1010. Study of fundamental principles underlying commercial production of vegetables: seeding, fertilization, harvesting and storage. (Special Fee: \$25.00)	3	3	1
ORH 2842 LANDSCAPE CONSTRUCTION Prerequisite: HOS 1010 or departmental approval. Comprehensive study of methods and practices in landscape construction industry today. Topics include mechanics of landscaping construction, materials selection and preparation, personnel hiring, training and retraining, work schedules, planning, labor analysis, pricing, bidding, and estimating.	4	3	2				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Hospitality and Tourism				HFT 2500			
FSS 2251	3	3	0	MARKETING AND SALES IN THE HOSPITALITY INDUSTRY	3	3	0
FOOD AND BEVERAGE MANAGEMENT				Students develop actual marketing campaign for business within hospitality industry. Emphasis on (a) analysis of market, competition and product, (b) planning financial budget and (c) developing short-term and long-range strategies to achieve desired profit through effective advertising, sales and public relations plan.			
An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service techniques. Procedures, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities.				HFT 2600	3	3	0
HFT 1000	3	3	0	HOSPITALITY LAW			
INTRODUCTION TO HOSPITALITY AND TOURISM INDUSTRY				Provides awareness of rights and responsibilities that law grants to or imposes upon a hotelkeeper, and illustrates possible consequences of failure to satisfy legal obligations. Specific attention to innkeeper-guest relationship, contracts, torts, civil and property rights and insurable risks.			
Introduction to many facets of hotel-motel and food services industries. Includes study of history, scope and innovations in industry as well as orientation visits to local establishments.				HFT 2750	3	3	0
HFT 1300	3	3	0	CONVENTION MANAGEMENT AND SERVICE			
MANAGING HOUSEKEEPING OPERATIONS				Defines scope and segmentation of convention and group business market, describes marketing and sales strategies to attract markets with specific needs, and explains techniques to meet needs as part of meeting and convention services.			
Systematic approach to managing housekeeping operations in hospitality industry. Emphasis on role of housekeeping department and understanding managerial skills necessary to efficiently operate department.				HFT 2930	1-3	1-3	0
HFT 1410	3	3	0	SELECTED TOPICS IN HOSPITALITY MANAGEMENT			
FRONT OFFICE MANAGEMENT				Prerequisite: Departmental approval. For students interested in discussion, exploration and observation of special topics in lodging, restaurant, tourism, attractions and food management. May be repeated for credit, but grade forgiveness cannot be applied.			
This course is designed to acquaint the student with Front Office Management. The course encompasses theory plus classroom computerized property management system exercises and simulations including reservations, arrival and departure of guests, night audit reports and procedures, yield management, and exception handling and reporting.				HFT 2942	1 - 4	variable	
HFT 1700	3	3	0	INTERNSHIP IN HOSPITALITY AND TOURISM			
INTRODUCTION TO TOURISM				Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including HFT 1000, (HFT 1410 or FSS 2251) and departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)			
Emphasis on international, national and state aspects of tourism. Comprehensive study of businesses involved in promotion of travel: transportation, accommodations, feeding and entertainment of travelers. Analysis of economic, cultural and sociological effects of tourism on communities and states.				Humanities			
HFT 2210	3	3	0	HUM 1020	3	3	0
HOSPITALITY MANAGEMENT				INTRODUCTION TO HUMANITIES			
Relates managerial functions to hospitality industry and trains student to become effective manager by applying management theories. Much emphasis on human relations and how to work efficiently with peers, superiors and subordinates.				Basic introduction to humanities. Focuses on central concepts, historical development and fundamental nature of philosophy, architecture, music, religion and art. Concepts from such disciplines integrated with contemporary American culture.			
HFT 2223	3	3	0				
HUMAN RELATIONS AND SUPERVISORY DEVELOPMENT							
Provides basic skills and knowledge of supervision with specific examples in the hospitality industry. It details the characteristics and responsibilities of an efficient and effective supervisor with emphasis placed on such management skills as solving problems, motivating employees and improving employee performance.							

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
HUM 2220 HUMANITIES - GREEK AND ROMAN Prerequisite: ENC 1101 or ENC 1101H. Integrated examination of dominant ideas in Western culture as expressed in art, literature, music, philosophy and religion. Covers period from Trojan War through Roman era, emphasizing development and influence of classical ideas. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if used to satisfy Gordon Rule requirement.	3	3	0	HUM 2234H HUMANITIES - ENLIGHTENMENT AND ROMANTICISM - HONORS Same as HUM 2234 with honors content. Honors program permission required.	3	3	0
HUM 2220H HUMANITIES - GREEK AND ROMAN - HONORS Same as HUM 2220 with honors content. Honors program permission required.	3	3	0	HUM 2250 HUMANITIES - TWENTIETH CENTURY Prerequisite: ENC 1101 or ENC 1101H. Integrated examination of dominant ideas in Western culture expressed in art, literature, music, philosophy and religion. Covers period from turn of century to present. Focuses on creative forces which have shaped contemporary consciousness from pioneering work of Einstein, Picasso, Stravinsky and Wright through dominance of objective consciousness to newly emerging guiding myths of today. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if used to satisfy Gordon Rule requirement.	3	3	0
HUM 2223 HUMANITIES - LATE ROMAN AND MEDIEVAL Prerequisite: ENC 1101 or ENC 1101H. Integrated examination of dominant ideas in Western culture expressed in art, literature, music, philosophy and religion. Covers period from late Roman Empire through Middle Ages, emphasizing development and historical influence of Christianity. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if used to satisfy Gordon Rule requirement.	3	3	0	HUM 2250H HUMANITIES - TWENTIETH CENTURY - HONORS Same as HUM 2250 with honors content. Honors program permission required.	3	3	0
HUM 2223H HUMANITIES - LATE ROMAN AND MEDIEVAL - HONORS Same as HUM 2223 with honors content. Honors program permission required.	3	3	0	HUM 2310 MYTHOLOGY Prerequisite: ENC 1101 or ENC 1101H. Examines world mythology in comparative perspective, analyzes myths with a variety of methods, and considers the application of mythological ideas and symbols in the humanities. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if used to satisfy Gordon Rule requirement.	3	3	0
HUM 2232 HUMANITIES - RENAISSANCE AND BAROQUE Prerequisite: ENC 1101 or ENC 1101H. Integrated examination of dominant ideas in Western culture expressed in art, literature, music, philosophy and religion. Covers period from Renaissance through Baroque era, emphasizing synthesis of classical and Christian elements. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if used to satisfy Gordon Rule requirement.	3	3	0	HUM 2310H MYTHOLOGY - HONORS Same as HUM 2310 with honors content. Honors program permission required.	3	3	0
HUM 2232H HUMANITIES - RENAISSANCE AND BAROQUE - HONORS Same as HUM 2232 with honors content. Honors program permission required.	3	3	0	HUM 2410 ASIAN HUMANITIES Examines dominant ideas and arts in South and East Asian cultures expressed in philosophy, literature, art, architecture, and music. Focus on India, China, and Japan; covers period from earliest civilization to present.	3	3	0
HUM 2234 HUMANITIES - ENLIGHTENMENT AND ROMANTICISM Prerequisite: ENC 1101 or ENC 1101H. Integrated examination of dominant ideas in Western culture expressed in art, literature, music, philosophy and religion. Covers period from Enlightenment through 19th century, emphasizing emergence of rationalism and modern science and Romantic rebellion. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if used to satisfy Gordon Rule requirement.	3	3	0	HUM 2461 LATIN AMERICAN HUMANITIES Prerequisite: ENC1101 or 1101H or equivalent. An integrated study of the history and culture and Latin America. Focuses on how modern Latin American cultures are the product of a historic biological and cultural interchange between Europe, Africa, and the Americas. Topics include pre-Columbian civilizations, the Encounter and its aftermath, independence and neo-colonialism, and modernist art, literature, and cinema. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if used to satisfy Gordon Rule requirement.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
HUM 2930 SELECTED TOPICS IN HUMANITIES Seminars offered for students interested in special topics in humanities. Topics selected from special areas of art, architecture, literature, religion, music and philosophy or combination of these areas. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3		variable	IDH 2120 INTERDISCIPLINARY STUDIES IN GENERAL EDUCATION III - HONORS Examination of new cosmology which emerged in early 20th century as result of relativity and quantum theory. Focuses on changing attitudes toward physical world and its impact on contemporary human values. Integrates physics, politics, mathematics, psychology, sociology, communications and humanities. Gordon Rule course which requires 6,000 words of writing. Honors program permission required. Minimum grade of C required for successful completion and/or to satisfy Gordon Rule and/or general education requirements. (Equivalent to humanities writing course, three hours; and social science course, three hours.)	6	6	0
HUM 2941 INTERNSHIP EXPLORATION IN HUMANITIES Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including six hours in Humanities, three of which must be a Gordon Rule writing course or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4		variable	IDH 2121 INTERDISCIPLINARY STUDIES IN GENERAL EDUCATION IV - HONORS Examination of new awareness of universe which resulted from new astronomical discoveries about "time" and "space" in past 15 years. Focuses on how discoveries are forcing re-examination of values in light of present day knowledge. Integrates astronomy, mathematics, biology, sociology, psychology, politics, communications and humanities. Gordon Rule course which requires 6,000 words of writing. Honors program permission required. Minimum grade of C required for successful completion and/or to satisfy Gordon Rule and/or general education requirements. (Equivalent to humanities writing course, three hours; and science, non-laboratory course, three hours.)	6	6	0
Interdisciplinary Studies - Honors				Internships			
IDH 1110 INTERDISCIPLINARY STUDIES IN GENERAL EDUCATION I - HONORS Introduction to process of rational thought and how people have organized process to define human values and physical universe. Focuses on Greek contributions to process, compares them to modern culture and integrates disciplines of physics, mathematics, language, rhetoric, psychology and humanities. Gordon Rule course which requires 6,000 words of writing. Honors program permission required. Minimum grade of C required for successful completion and/or to satisfy Gordon Rule and/or general education requirements. (Equivalent to humanities non-writing course, three hours; and ENC 1101, Freshman Composition I, three hours)	6	6	0	See Internship course descriptions within the discipline areas.			
IDH 1111 INTERDISCIPLINARY STUDIES IN GENERAL EDUCATION II - HONORS Examination of change in thinking process as result of scientific revolution of 17th, 18th and 19th centuries. Focuses on process itself and impact this process has on modern culture. Integrates information from astronomy, physics, mathematics, biology, psychology, economics, communications and humanities. Gordon Rule course which requires 6,000 words of writing. Honors program permission required. Minimum grade of C required for successful completion and/or to satisfy Gordon Rule and/or general education requirements. (Equivalent to ENC 1102 Freshman Composition II, three hours; and science non-laboratory course, three hours)	6	6	0	Journalism			
				JOU 1100 NEWS REPORTING In-depth reporting with emphasis on modern news and feature stories. Stresses elements of news: sources, structure, style, and mechanics of production. Recommend students also enroll in College Newspaper.	3	3	0
				JOU 1401 ADVANCED REPORTING Prerequisite: JOU 1100. Develops student as specialized news gatherer and reporter. Sharpens in-depth reportorial skills; emphasis on investigative reporting. Students submit material to student newspaper and other publications.	3	3	0
				JOU 1420L COLLEGE NEWSPAPER Laboratory course for production of College newspaper. Includes reporting, editing, business, makeup, and other phases of newspaper production.	1	0	3

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
JOU 1421L COLLEGE NEWSPAPER Laboratory course for production of College newspaper. Includes reporting, editing, business, makeup, and other phases of newspaper production.	1	0	3	JOU 2941 INTERNSHIP EXPLORATION IN JOURNALISM Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including ENC 1101, (JOU 1100 or MMC 1000). This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
JOU 1440L COLLEGE MAGAZINE Laboratory course for production of College magazine. Staff meets three hours per week. Writing, editing, layout, and other phases of magazine entail activity outside regular class.	1	0	3	MMC 1000 SURVEY OF MASS COMMUNICATIONS Introduction to history, development and current practices of media of mass communication. Presents functions of newspapers, magazines, radio, television, and advertising in light of responsibilities to public.	3	3	0
JOU 1441L COLLEGE MAGAZINE Laboratory course for production of College magazine. Staff meets three hours per week. Writing, editing, layout, and other phases of magazine entail activity outside regular class.	1	0	3	MMC 2100 WRITING FOR MASS COMMUNICATIONS Fundamental instruction and practice in writing for journalism, advertising, broadcasting, and public relations. Pre-professional course for students majoring in journalism and communications.	3	3	0
JOU 2201 EDITING AND MAKEUP Study and application of copydesk techniques: evaluation and copy editing, correction of faulty news stories, headline writing, page layout design, and work with wire copy. Recommend students also enroll in College Newspaper.	3	3	0	Library Science			
JOU 2422L COLLEGE NEWSPAPER Laboratory course for production of College newspaper. Includes reporting, editing, business, makeup, and other phases of newspaper production.	1	0	3	LIS 1001 COMPUTER RESEARCH Introduction to the use of electronic library resources. Emphasis is placed on the use of these resources to meet the informational needs of students. The course will focus on accessing information electronically through LINCC, electronic reference, online databases, and the Internet. This course includes lectures, group activities, and hands-on experience.	1 - 3	variable	
JOU 2423L COLLEGE NEWSPAPER Laboratory course for production of College newspaper. Includes reporting, editing, business, makeup, and other phases of newspaper production.	1	0	3	LIS 2002 INTRODUCTION TO THE INTERNET Provides an introduction to the Internet. Covers E-mail, World Wide Web, research strategies, search tools, and evaluating and citing Internet resources. This course includes lectures, group activities, and hands-on experience.	1 - 3	variable	
JOU 2442L COLLEGE MAGAZINE Laboratory course for production of College magazine. Staff meets three hours per week. Writing, editing, layout, and other phases of magazine entail activity outside regular class.	1	0	3	LIS 2004 INTRODUCTION TO INTERNET RESEARCH Provides an introduction to the Internet. Covers Internet history, online communications, research strategies, search tools, evaluating Internet sources and documenting Internet resources.	1	1	0
JOU 2443L COLLEGE MAGAZINE Laboratory course for production of College magazine. Staff meets three hours per week. Writing, editing, layout, and other phases of magazine entail activity outside regular class.	1	0	3	LIS 2930 SELECTED TOPICS IN LIBRARY SCIENCE Selected topics in library science based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
JOU 2930 SELECTED TOPICS IN JOURNALISM For students interested in research, discussion, and observation of special topics in journalism. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable					

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Logic							
PHI 1100	3	3	0	MAC 1147	5	5	0
PRACTICAL LOGIC				PRECALCULUS			
Study of effective thinking based on procedures of logic. Appraisal of evaluation of evidence, practice in detection of fallacies and irrelevancies and testing of arguments for validity and reliability.				Prerequisite: Departmental approval or appropriate score on an approved assessment. To be considered as a candidate for this accelerated course, you must be an independent, self-motivated learner who has successfully completed precalculus level algebra and trigonometry. This course is preparation for the calculus sequence. Topics include a symbolical, graphical, and numerical analysis of polynomial, exponential, logarithmic, power, rational and trigonometric functions; matrices, sequences, induction, binomial theorem, conic sections, and the polar coordinate system; trigonometric equations and inverse functions; solutions of plane triangles and vectors. Applications emphasizing connections with other disciplines and with the real world will be included. Technology tools will be utilized in addition to analytical methods. Gordon Rule course. Minimum grade of C required if MAC 1147 is used to satisfy Gordon Rule and general education requirements. Credit not given for both MAC 1147 and MAC 1114 nor for MAC 1147 and MAC 1132 nor for MAC 1147 and MAC 1140 nor for MAC 1147 and MAC 1142.			
Mathematics				MAC 2233	3	4	0
See diagram of progression of mathematics courses on next page.				CALCULUS FOR BUSINESS AND SOCIAL SCIENCE			
MAC 1105	3	3	0	Prerequisite: Minimum grade of C in MAC 1102 or MAC 1104 or MAC 1105 or appropriate score on an approved assessment. Introduction to calculus with applications to business and social science. Topics include differentiation and integration of algebraic, exponential and logarithmic functions, rates of change, curve sketching, and applications of the derivative and integration. Gordon Rule course. Minimum grade of C required if MAC 2233 is used to satisfy Gordon Rule and general education requirements.			
COLLEGE ALGEBRA				MAC 2311	5	5	0
Prerequisite: Minimum grade of C in either MAT 0025C or MAT 1033C or appropriate score on an approved assessment. Course based on the study of functions and their role in problem solving. Topics include graphing, the linear, quadratic, and exponential families of functions, and inverse functions. Students will be required to solve applied problems and communicate their findings effectively. Technology tools will be utilized in addition to analytical methods. Gordon Rule course. Minimum grade of C required if MAC 1105 is used to satisfy Gordon Rule and general education requirements. Credit not given for both MAC 1105 and MAC 1102 nor for MAC 1105 and MAC 1104 nor for MAC 1105 and MAC 1132.				CALCULUS WITH ANALYTIC GEOMETRY I			
MAC 1114	3	3	0	Prerequisite: Minimum grade of C in MAC 1140 and MAC 1114 or MAC 1147 or MAC 1142 or MAC 1132 or MAC 1104 and MAC 1114 or appropriate score on an approved assessment. Topics include circle and parabola, limits and continuity, derivatives of algebraic and trigonometric forms, applications of derivatives, and definite and indefinite integral. Gordon Rule course. Minimum grade of C required if MAC 2311 is used to satisfy Gordon Rule and general education requirements.			
COLLEGE TRIGONOMETRY				MAC 2311H	5	5	0
Prerequisite: Minimum grade of C in MAC 1102 or MAC 1104 or MAC 1105 or appropriate score on an approved assessment. Topics include a symbolical, graphical, and numerical analysis of trigonometric functions; solutions of plane triangles and vectors. Applications emphasizing connections with other disciplines and with the real world will be included. Technology tools will be utilized in addition to analytical methods. Gordon Rule course. Minimum grade of C required if MAC 1114 is used to satisfy Gordon Rule and general education requirements. Credit not given for both MAC 1114 and MAC 1132 nor for MAC 1114 and MAC 1142. nor for MAC 1114 and MAC 1147.				CALCULUS WITH ANALYTIC GEOMETRY I - HONORS			
MAC 1140	3	3	0	Same as MAC 2311 with honors content. Honors program permission required.			
PRECALCULUS ALGEBRA				MAC 2312	5	5	0
Prerequisite: Minimum grade of C in MAC 1105 or appropriate score on an approved assessment. Algebra preparation for the calculus sequence. Topics include a symbolical, graphical, and numerical analysis of polynomials, exponential, logarithmic, power, and rational functions; matrices, sequences, induction, binomial theorem and conic sections. Applications emphasizing connections with other disciplines and with the real world will be included. Technology tools will be utilized in addition to analytical methods. Gordon Rule course. Minimum grade of C required if MAC 1140 is used to satisfy Gordon Rule and general education requirements. Credit not given for both MAC 1140 and MAC 1132 nor for MAC 1140 and MAC 1142 nor for MAC 1140 and MAC 1147.				CALCULUS WITH ANALYTIC GEOMETRY II			
				Prerequisite: Minimum grade of C in MAC 2311. Topics include differentiation and integration of exponential logarithmic transcendental functions, techniques of integration, indeterminate forms, conic sections, and infinite series. Gordon Rule course. Minimum grade of C required if MAC 2312 is used to satisfy Gordon Rule and general education requirements.			

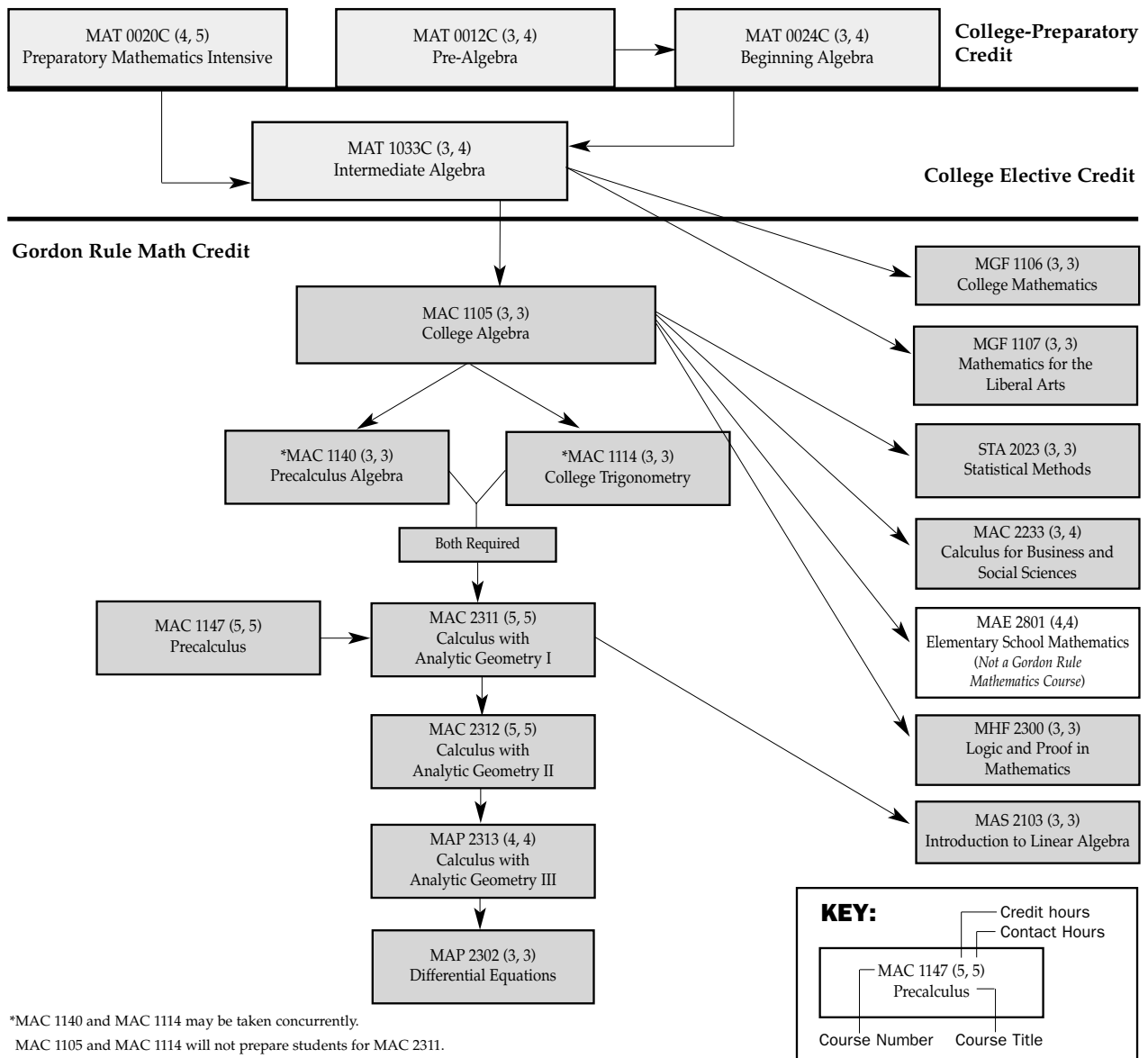
Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
--------	----	-----	-----	--------	----	-----	-----

MAC 2312H 5 5 0
CALCULUS WITH ANALYTIC GEOMETRY II - HONORS
 Same as MAC 2312 with honors content. Honors program permission required.

MAC 2313 4 4 0
CALCULUS WITH ANALYTIC GEOMETRY III
 Prerequisite: Minimum grade of C in MAC 2312. Topics include polar coordinates, vectors, three dimensional analytic geometry, parametric equations, partial derivatives, multiple integration Gordon Rule course. Minimum grade of C required if MAC 2313 is used to satisfy Gordon Rule and general education requirements.

MAE 2801 4 4 0
ELEMENTARY SCHOOL MATHEMATICS CURRICULUM AND INSTRUCTION
 Prerequisite: Minimum grade of C in MAC 1102 or MAC 1104 or MAC 1105 or appropriate score on an approved assessment. Mathematics appropriate for elementary school teacher. Topics include six basic sets of numbers, operations with whole numbers, integers and rational numbers, learning sequences, algorithms, problem solving techniques, error patterns, number systems, geometry, statistics, and graphing. Does not apply toward Gordon Rule or general education requirements.

MATH PATH



*MAC 1140 and MAC 1114 may be taken concurrently.
 MAC 1105 and MAC 1114 will not prepare students for MAC 2311.

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
MAP 2302 DIFFERENTIAL EQUATIONS Prerequisite: Minimum grade of C in MAC 2313 or departmental approval. Introduction to methods and applications of ordinary differential equations. Topics include first order differential equations and applications; higher order linear differential equations with applications; Laplace transforms; introduction to numerical methods. Gordon Rule course. Minimum grade of C required if MAP 2302 is used to satisfy Gordon Rule and general education requirements.	3	3	0	MAT 0024C BEGINNING ALGEBRA Prerequisite: Minimum grade of C in MAT 0012C or appropriate score on an approved assessment. This college-preparatory course is designed to supplement the algebraic background of students prior to taking MAT 1033C Intermediate Algebra. Topics include sets, fundamental operations with polynomials, linear equations and inequalities with applications, factoring and its use in algebra, introduction to graphing of linear equations, introduction to radicals, and use of calculators. Minimum grade of C required for successful completion. This course does not apply toward mathematics requirements in general education or toward any associate degree. (Special Fee: \$25.00)	3	3	1
MAS 2103 INTRODUCTION TO LINEAR ALGEBRA Prerequisite: Minimum grade of C in MAC 2311. Designed to prepare students majoring in engineering, mathematics, natural sciences or behavioral sciences which require matrix techniques. Includes matrix algebra, determinants systems of linear equations, eigenvectors, and special matrices. Gordon Rule course. Minimum grade of C required if MAS 2103 is used to satisfy Gordon Rule and general education requirements.	3	3	0	MAT 1033C INTERMEDIATE ALGEBRA Prerequisite: Minimum grade of C in MAT 0020C or MAT 0024C or appropriate score on an approved assessment. This course presents algebraic skills for MAC 1105. Topics include linear equations and inequalities in two variables and their graphs, systems of linear equations and inequalities, introduction to functions, factoring, algebraic fractions, rational equations, radicals and rational exponents, complex numbers, quadratic equations, scientific notation, applications of the above topics and the communication of mathematics. Applications emphasizing connections with disciplines and the real world will be included. For the A. A. Degree, this course carries general elective credit but does not satisfy either Gordon Rule or general education requirements. For the A. S. Degree, this course can fulfill general education mathematics requirements if a minimum grade of C is earned. (Special Fee: \$25.00)	3	3	1
MAS 2103H INTRODUCTION TO LINEAR ALGEBRA Same as MAS 2103 with honors content. Honors program permission required.	3	3	0	MAT 1905 DIRECTED INDIVIDUAL STUDIES Provides opportunity to develop specific individual program-related mathematical skills and/or concepts in individualized setting. May not be used in lieu of any mathematics course listed in catalog. Application must be made to department office.	1 - 4	variable	
MAT 0012C PRE-ALGEBRA This is the first course in a college-preparatory, two-course sequence (MAT 0012C and MAT 0024C) designed to prepare students for MAT 1033C Intermediate Algebra. This course emphasizes the fundamental mathematic operations with application to beginning algebra. Significant time will be devoted to connections between mathematics and other academic disciplines and to applications outside educational settings. Minimum grade of C required for successful completion. This course does not apply toward mathematics requirements in general education or toward any associate degree. (Special Fee: \$25.00)	3	3	1	MAT 2930 SELECTED TOPICS IN MATHEMATICS Prerequisite: Minimum grade of C in MAC 1102 or MAC 1104 or MAC 1105 or appropriate score on an approved assessment. Examines selected topics in mathematics based on historical, theoretical, application or research approach. Does not apply toward Gordon Rule or general education requirements. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
MAT 0020C PREPARATORY MATHEMATICS INTENSIVE Prerequisite: Appropriate score on an approved assessment. This college-preparatory course is designed to prepare students for MAT 1033C Intermediate Algebra. Topics include sets, computations with decimals, percents, integers, operations with rational and polynomial expressions, solving linear equations and expressions, plane geometric figures and applications, graphing ordered pairs and lines and determining the intercepts of lines. Minimum grade of C required for successful completion. This course does not apply toward mathematics requirements in general education or toward any associate degree. (Special Fee: \$25.00)	4	4	1	MGF 1106 COLLEGE MATHEMATICS Prerequisite: Minimum grade of C in MAT 1033C or MAC 1102 or MAC 1104 or MAC 1105 or appropriate score on an approved assessment or departmental approval. Topics include systematic counting, probability, statistics, geometry, sets, logic, and the history of mathematics. Gordon Rule course. Minimum grade of C required if MGF 1106 is used to satisfy Gordon Rule and general education requirements. This course is not a prerequisite for any other mathematics course. Credit may not be given for both MGF 1106 and MGF 2106 nor for MGF 1106 and MGF 2202.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
MGF 1107 MATHEMATICS FOR THE LIBERAL ARTS Prerequisite: Minimum grade of C in MAT 1033C or MAC 1102 or MAC 1104 or MAC 1105 or appropriate score on an approved assessment. General education mathematics course which covers topics chosen from problem solving, numeration and mathematical systems, financial mathematics, history of mathematics, voting techniques and apportionment, chaos theory, networking, knot theory, connections to other disciplines, and other current and special topics in mathematics. Gordon Rule course. Minimum grade of C required if MGF 1107 is used to satisfy Gordon Rule and general education requirements.	3	3	0	STA 2023H STATISTICAL METHODS - HONORS Same as STA 2023 with honors content. Honors program permission required.	3	3	0
MGF 1118 MATHEMATICS CLAST REVIEW Designed to give students planning to take computational portion of CLAST exam opportunity to review necessary mathematical skills. Includes review of topics of arithmetic, algebra, logical reasoning, geometry, probability and statistics as well as test-taking strategies and familiarization with requirements and format of CLAST.	1	1	0	Meteorology MET 1010 INTRODUCTION TO METEOROLOGY Introduction to study of atmospheric phenomena. Includes study of atmospheric structure, heat budget, winds, air pollution, and local and regional weather forecasting.	3	3	0
MHF 2300 LOGIC AND PROOF IN MATHEMATICS Prerequisite: Minimum grade of C in MAC 1104 or MAC 1105 or appropriate score on an approved assessment. Topics include basic mathematical logic, methods of proof in mathematics, application of proof to elementary mathematical structures. For prospective major in mathematics or mathematics education. Gordon Rule course. Minimum grade of C required if MHF 2300 is used to satisfy Gordon Rule and general education requirements.	3	3	0	Microelectronics Manufacturing Technology See Electronics Engineering Technology for course descriptions.			
MHF 2300H LOGIC AND PROOF IN MATHEMATICS Same as MHF 2300 with honors content. Honors program permission required.	3	3	0	Military Science MIS 1023 ORIENTEERING AND SURVIVAL Designed to acquaint the student with basic sport orienteering, map reading techniques and field expedient navigational skills in a classroom and field environment.	1	1	0
MTB 1304 MODERN COMPUTATIONAL METHODS Open to students desiring to learn to use microcomputer or programmable calculator as aid in solving mathematical problems. Student gains experience solving problems using programming techniques. Each student completes individual project using modern computational methods to solve problem in selected field. Recommended for pre-business, pre-science and pre-engineering majors. Does not apply toward Gordon Rule or general education requirements.	2	3	0	MIS 1031 INTRODUCTION TO MILITARY SCIENCE Organization of Army and ROTC program. Discussion includes career opportunities, significance of military courtesy and basic principles of land navigation.	2	2	0
STA 2023 STATISTICAL METHODS Prerequisite: Minimum grade of C in MAC 1102 or MAC 1104 or MAC 1105 or satisfactory score on an approved assessment. An introductory statistics course covering collection, description and interpretation of data. Topics include sampling, summarizing data graphically and numerically, probability distributions, confidence interval estimation, hypothesis testing, correlation and regression. Gordon Rule course. Minimum grade of C required if STA 2023 is used to satisfy Gordon Rule and general education requirements.	3	3	0	MIS 1400 FUNDAMENTALS OF LEADERSHIP DEVELOPMENT Development of leadership abilities through practical exercises and field training exercises. Analysis of weapons, basic first aid principles, customs and traditions and roles of army, national guard and reserves.	2	2	0
				MIS 2120 THE THREAT Comparison of United States Army with foreign armies: includes current threat and potential use of nuclear, biological and chemical warfare. Introduction to communications.	2	2	0
				MIS 2300 SMALL UNIT TACTICS Small unit tactics with emphasis on patrolling. Advanced map reading, including military geography, land navigation, use of compass, and military symbols.	2	2	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Music							
MUL 1010 MUSIC APPRECIATION General survey of music and composers, with extensive listening to develop intelligent understanding and appreciation of world's great music. Open to all students.	3	3	0	MUM 2720 THE BUSINESS OF MUSIC PRODUCTION I The fundamentals, guidelines and use of copyright law, contracts, agencies and management, publishing, song writing, recording production and marketing. (Special Fee: \$25.00)	3	3	0
MUL 1110 MUSIC LITERATURE Prerequisite: ENC 1101 or ENC 1101H. Survey of compositional and performance styles of significant composers from Middle Ages to present. Extensive live and recorded listening experiences. Required of all music majors. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C is required if MUL 1110 is used to satisfy the humanities requirement in general education.	3	3	0	MUM 2721 THE BUSINESS OF MUSIC PRODUCTION II Prerequisite: MUM 2720. A continuation of The Business of Music Production I. The student will develop a written business plan for his/her own business enterprise. (Special Fee: \$25.)	3	3	0
MUM 2342 MIDI AND SHOW CONTROL Prerequisite: MUM 2604. A study of MIDI, SMPTE, and Show Control. A study will be made of show control in a range of entertainment venues. (Special Fee: \$25.00)	3	2	2	MUM 2942 INTERNSHIP IN MUSIC TECHNOLOGY/BUSINESS Prerequisite: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including MUM 2720 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
MUM 2600 PRINCIPLES OF SOUND RECORDING Prerequisite: TPA 2260. This course is designed to develop recording skills through a hands-on, project-oriented curriculum and in-depth classroom studies in modern recording practices. Focuses on engineering techniques for both music production and post-production including digital and analog recording as well as mixing, mastering, and signal processing. (Special Fee: \$25.00)	3	3	2	MUN 1120 SYMPHONIC BAND Required of all music majors who play appropriate instruments. Laboratory training session for fundamentals of rehearsal techniques and performance of standard concert band literature. Open, by audition, to all students who play appropriate instruments. May be repeated for credit, but grade forgiveness cannot be applied.	1	1	2
MUM 2604 MULTI-TRACK PRODUCTION TECHNIQUES I Prerequisite: MUM 2600. Multi-track production techniques offer students with a background in multi-track recording an opportunity to sharpen their skills in recording, mixdown editing, and audio production. (Special Fee: \$25.00)	2	2	2	MUN 1311 VOICES OF VALENCIA A performing group established for all interested in performing choral music. Music reading skills not required. Public performance stressed. Open to all students without audition. May be repeated for credit, but grade forgiveness cannot be applied.	1	1	2
MUM 2606 PRINCIPLES OF DIGITAL AUDIO Prerequisite: MUM 2604. A study of digital audio production techniques which includes sampling, editing, and mixing using a digital audio workstation. The student will complete audio recording projects using a variety of digital production techniques. (Special Fee: \$25.00)	3	2	2	MUN 1340 CONTEMPORARY ENSEMBLE Choral ensemble which performs choreographed selections from popular Broadway musical and vocal jazz repertoire. Open to all students who qualify by auditions held prior to and during registration. May be repeated for credit, but grade forgiveness cannot be applied.	1	1	2
MUM 2700 SMALL BUSINESS MARKETING AND MANAGEMENT IN THE MUSIC INDUSTRY Presents marketing and management principles and practices as applied to the successful operation of a small business in the music industry. (Special Fee: \$25.00)	2	2	0	MUN 1420 WOODWIND CHOIR Selected performing ensemble open by audition to any woodwind player. Representative woodwind choir literature from all styles and periods. May be repeated for credit, but grade forgiveness cannot be applied.	1	1	2

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
MUN 1430 BRASS CHOIR Selected performing small ensemble open to any brass player. Representative brass choir literature from all styles and periods. May be repeated for credit, but grade forgiveness cannot be applied.	1	1	2	MUT 2126 MUSICIANSHIP III Prerequisite: MUT 1122 or departmental approval. Advanced techniques of composition, through analysis of Classical and Romantic music, together with introduction to counterpoint and simpler instrumental and vocal forms. Extensive listening to selected live and recorded performances. Further development of skills in dictation and sight-singing.	4	3	3
MUN 2011 PERFORMANCE LAB Provides music majors in-depth study of performance problems, techniques, repertoire and performance skills. May be repeated for credit, but grade forgiveness cannot be applied.	1	1	0	MUT 2127 MUSICIANSHIP IV Prerequisite: MUT 2126 or departmental approval. Advanced techniques of composition to include style of 20th century. Composition and analysis of basic homophonic and contrapuntal forms of two and three parts. Extensive listening to selected live and recorded performances. Further development of skills in dictation and sight-singing.	4	3	3
MUN 2310 VALENCIA SINGERS Open by audition to students. Select performing group established for music majors and/or students with experience in choral singing and music-reading ability. Literature and public performance stressed. May be repeated for credit, but grade forgiveness cannot be applied.	1	1	2	MUT 2231 KEYBOARD HARMONY I Prerequisite: Two semesters of piano or departmental approval. Application of materials studied in music theory, with particular attention to improvisation and harmonization of melodies and elementary score reading.	1	1	1
MUN 2710 JAZZ LAB BAND Open by audition to all students who play appropriate instruments. Performance of varied literature in jazz, swing and rock. May be repeated for credit, but grade forgiveness cannot be applied.	1	1	2	MUT 2232 KEYBOARD HARMONY II Prerequisite: MUT 2231. Advanced application of materials studied in music theory, with particular attention to transposing, reading of instrumental and choral scores, and melody harmonizations in various styles.	1	1	1
MUS 2360 COMPUTER APPLICATIONS IN THE MUSIC INDUSTRY This course will provide an overview and hands-on experience with a wide variety of computer-based music technology and cross-platform software applications used within the music business environment. (Special Fee: \$25.00)	3	2	1	MVK 1111 PIANO CLASS FOR MUSIC MAJORS I AND II Elementary course in piano designed to prepare non-keyboard music majors for minimum proficiency requirements in music major programs. Involves major and minor scales, chord progressions, sight-reading and transposition. Open to non-music majors by departmental approval. May be repeated for credit, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	1	1	1
MUS 2930 SELECTED TOPICS IN MUSIC For students who desire in-depth study of special topics in music through research, discussion, performance and observation. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		MVK 1811 PIANO CLASS I AND II Group instruction on electronic pianos for students with little or no experience in reading music or playing piano. Not recommended for music majors, who should register for MVK 1111. May be repeated for credit, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	1	1	1
MUT 1011 MUSIC THEORY Study of the fundamentals of music through analysis and composition, with application to both traditional and popular styles of music. Development of skills in dictation and sight singing. Not recommended for Music Majors or Musicianship Specialization.	4	3	3	MVS 1816 GUITAR CLASS Group instruction for beginning guitar students. Open to all students. Not recommended for students majoring in guitar. May be repeated for credit, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	1	1	1
MUT 1121 MUSICIANSHIP I Study of fundamentals of music through analysis and composition of Baroque and Classical music. Development of basic skills in dictation and sight-singing.	4	3	3				
MUT 1122 MUSICIANSHIP II Prerequisite: MUT 1121 or departmental approval. Continuation of MUT 1121 through analysis and composition of Baroque and Classical music. Continued development of basic skills in dictation and sight-singing.	4	3	3				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
MVV 1111 VOICE CLASS For instrumental music majors and students with no previous vocal study. Emphasis on breath control, diction, tone production and development of repertoire. May be used for secondary instrument requirements for music majors. May be repeated for credit, but grade forgiveness cannot be applied. (Special Fee: \$25.00)	1	1	1	NUR 1112C CONCEPTS BASIC TO NURSING Prerequisite: BSC 2094C. Prerequisite or Corequisite: NUR 1060C. Corequisites: HSC 2550, NUR 1025L and NUR 1141C. Introduces basic concepts of wellness across the life span. Presents principles of communication utilizing interviewing techniques, classroom collaborative learning approaches and interactive computer-assisted instruction. Introduces concepts of health delivery including nursing process, family systems, critical thinking, and basic human needs. Focuses on the understanding and new methods that are utilized in the profession of nursing including computerized documentation and research development enhanced by computerized online databases. Covers selected principles from physical, biological and social sciences. (Special Fee: \$20.00)	4	3	3
NOTE: Fees will be assessed for private lessons. See Financial Information section of this catalog.							
Nursing To register for any of the Nursing courses, you must apply and be accepted to the Nursing program.				NUR 1141C CONCEPTS AND PRACTICE OF MEDICATION ADMINISTRATION Prerequisite: BSC 2094C. Corequisites: HSC 2550, NUR 1025L and NUR 1112C. Concepts necessary for exercising sound judgment in medication administration are presented. This includes basic principles of pharmacology, drug classifications with specific medications, dosage calculations, interpreting medication orders and the special knowledge and skills necessary for safe delivery of medications. (Special Fee: \$20.00)	3	2	3
NUR 1000C TRANSITION INTO PROFESSIONAL NURSING Prerequisites: BSC 2094C, HSC 2550 and DEP 2004. Corequisites: NUR 1060C and NUR 1141C. This course is specially designed for the LPN student as the introductory nursing course in the LPN/RN Transition Option. The course builds on the foundation of nursing knowledge that was acquired during practical nursing education. Emphasis is placed on total assessment, planning, intervention, and evaluation of individual and community health needs. Student learning will be promoted through computer-assisted instruction, collaborative learning approaches and independent learning activities. Therapeutic communication techniques will be reinforced and oral communication skills will be utilized for classroom and nursing arts lab presentations. In addition, emphasis will be placed on motivation and responsibility for role change. Basic skills most commonly used in nursing practice will be reviewed.	2	1	3	NUR 1222C ADULT HEALTH I Prerequisites: NUR 1112C, NUR 1060C, NUR 1025L, NUR 1141C and HSC 2550. Corequisite: NUR1463C. Builds on the concepts and skills obtained in the prerequisite courses. This course focuses on basic medical-surgical nursing and health promotion in care of adult clients. Utilization of the nursing process in care of the acute/chronically ill adult is presented. Emphasizes the physiological and psychological functions of the adult patient in both the acute care and community settings. (Special Fee: \$64.00)	4	2	6
NUR 1025L TECHNIQUES OF CLINICAL NURSING Prerequisite: BSC 2094C. Corequisites: NUR1060C, NUR 1112C and NUR 1141C. This laboratory course includes techniques most commonly used in nursing practice. The basic skills taught are related to infection control, sepsis, body mechanics hygiene, nutrition, oxygenation, elimination and specimen collection. The nursing techniques will be taught within the theoretical context. The nursing techniques will also emphasize concepts related to legal and ethical issues, client teaching/learning, and an understanding that nursing techniques need to be administered professionally and in a context of caring. Safe and accurate performance of the critical aspects of nursing skills is expected. (Special Fee: \$40.00)	2	0	6	NUR 1463C MATERNAL CHILD HEALTH I Prerequisites: NUR 1112C, NUR 1060C, NUR 1025L, NUR 1141C and HSC 2550. Corequisite: NUR1222C, DEP2004. Focuses on developmental theories utilized in assessing, analyzing, planning, implementing and evaluating care for the childbearing and child rearing family as a unit. Emphasis is placed on wellness promotion and common recurring problems. Clinical assignments will occur in the community and hospital setting. A focus will also be promotion of health in women. (Special Fee: \$40.00)	4	2	6
NUR 1060C HEALTH AND PHYSICAL ASSESSMENT Prerequisite: HSC 2550. Corequisites: NUR 1112C and NUR 1141C or departmental approval. Concepts and principles of health and physical assessment for clients throughout the life span. Provides students with the opportunity to develop hands-on skills in assessment. (Special Fee: \$20.00)	3	2	3	NUR 2225C ADULT HEALTH II Prerequisites: NUR 1222C and NUR 1463C. Corequisite: NUR 2522C. Builds on the concepts obtained in NUR 1222C. Applies psychological and pathophysiological concepts to adult clients in acute, long term and community settings. It incorporates health promotion, in-depth client assessment, advanced interviewing skills, refinement of the nursing process and basic client teaching plans. (Special Fee: \$40.00)	4	2	6

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
NUR 2241C ADULT HEALTH III Prerequisites: NUR 2522C and NUR 2225C. Corequisite: NUR 2464C. Builds on the concepts obtained in NUR 2225C. Applies psychological and pathophysiological concepts to adult clients in acute, long term and community settings. It incorporates health promotion, in-depth client assessment, oral care plan and seminar presentations, experience in political and professional awareness and experience in leadership and management. (Special Fee: \$40.00)	4	2	6	NUR 2930 SELECTED TOPICS IN NURSING For students interested in obtaining additional nursing skills. Provides clinical experience and seminar type discussion activities for student pursuing selected topics in nursing. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 5	variable	
NUR 2464C MATERNAL CHILD HEALTH II Prerequisites: NUR 2522C and NUR 2225C. Corequisite: NUR 2241C. Builds on Maternal Child Health I. Focus will include promotion of optimal level of wellness and complex problems with health for individuals in the childbearing and child rearing family. Clinical assignments will occur in the community and hospital setting. A focus will also be promotion of health in women. (Special Fee: \$40.00)	4	2	6	Nutrition			
NUR 2522C MENTAL HEALTH NURSING CONCEPTS AND PRACTICES Prerequisites: NUR 1222C and NUR 1463C. Corequisite: NUR 2225C. Assists student in refining communication skills applied to any area of nursing practice. Guides student in understanding dynamics of human behavior and acquiring knowledge in content areas familiar to mental health and mental illness settings. Builds on mental health concepts developed in previous nursing courses and social and behavioral sciences. Learning experiences for patient care will be conducted in psychiatric hospital settings and community mental health settings. (Special Fee: \$40.00)	4	2	6	HUN 1001 BASICS OF PERSONAL NUTRITION Fundamentals of nutrition, including human nutritional requirements and role of nutrition in maintenance of good health.	3	3	0
NUR 2733C PATIENT CARE MANAGEMENT Prerequisites: NUR 2241C and NUR 2464C. Corequisite: NUR 2811L. Focuses on the role of the nurse as provider and manager of patient care utilizing previously learned nursing care competencies. Clinical decision making, collaboration skills, understanding of organizational structures and functions, management and leadership process, management and leadership skills, and professional responsibilities within a complex health care system will be emphasized. Analysis of nursing practice problems and generation of solutions through group discussion will be utilized. Learning experiences for patient care will be conducted in a variety of health care settings. (Special Fee: \$40.00)	4	1	9	HUN 2242 ESSENTIALS OF NUTRITION WITH DIET THERAPY A study of general and clinical nutrition. Focuses on nutrients and their digestion, absorption, metabolism, transport and interactions. Students will learn how to select a meal plan for optimum health, nutrition throughout the life cycle and current issues and controversies in nutrition. The diet therapy feature is included for students entering health-care fields.	3	3	0
NUR 2811L CLINICAL PRACTICUM IN NURSING Prerequisite: NUR 2733C. A clinical course designed to prepare the Associate in Science degree nursing student to assume the role of provider of care, manager of care, and member of the discipline. The student will demonstrate their ability to independently perform the roles of the new associate degree graduate, with the guidance of faculty and/or a RN preceptor. Learning experiences for this course will be conducted in a variety of patient care settings. (Special Fee: \$40.00)	2	0	6	HUN 2930 SELECTED TOPICS IN NUTRITION Prerequisite: Departmental approval. Selected topics in nutrition based on the needs and areas of interest of the class and professor. May include laboratory work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
				Oceanography			
				OCE 1001 INTRODUCTION TO OCEANOGRAPHY Acquaints student with elementary physical, biological, chemical and geological characteristics of world ocean system. Emphasis on Florida's unique relationship with ocean environment.	3	3	0
				OCE 2930 SELECTED TOPICS IN OCEANOGRAPHY Prerequisite: Departmental approval. Selected topics in oceanography based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
				Office Systems Technology			
				OST 1100 KEYBOARDING AND DOCUMENT PROCESSING I Techniques and basic skill in keyboarding, mastery of computer keyboard, operation and care of computer. Students prepare business letters, reports and tabulated applications. For students with little or no keyboarding experience. (Special Fee: \$25.00)	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
OST 1108 BUILDING KEYBOARDING SPEED AND ACCURACY Previous keyboarding, document processing and word processing experience strongly recommended. Computerized diagnostic tests identify individual weaknesses at various levels of proficiency in keyboarding. Alphabetic, numeric, and speed drills improve keyboarding accuracy. Includes ten-key number pad.	1	1	0	OST 1335 BUSINESS COMMUNICATIONS Prerequisite: ENC 1101. Practice in developing effective oral and written business communication skills to create successful human relations. Emphasis on the role of technology and diversity within the workforce.	3	3	0
OST 1110 KEYBOARDING AND DOCUMENT PROCESSING II Previous keyboarding, document processing and word processing experience strongly recommended. Continuation of skills of keyboarding, including their application to more advanced styles of correspondence, statistical typing and manuscripts. Instruction on computers. Students use automated functions of equipment while keying problems. (Special Fee: \$25.00)	3	3	0	OST 1355 RECORDS MANAGEMENT AND LEGAL IMPLICATIONS Overview of proper records management procedures within a variety of business enterprises. Student will learn and work with manual filing systems and software applications. They will learn the basic legal background requirements (such as Privacy Act and Freedom of Information Act) for the release and safekeeping of information and the laws and regulations regarding the management of such records.	3	3	0
OST 1141 COMPUTER KEYBOARDING Instruction in touch system of alphabetic and numeric keyboarding on computer as well as ten-key number pad. Skills can be used on computer and electronic terminals. This course may not be used for credit as part of the Office Systems Technology degree programs.	1	2	0	OST 1461 MEDICAL OFFICE SIMULATION Prerequisite: OST 1611. Provides students with classroom experience of performing realistic administrative duties within a physician's office. Students will work in a simulated medical office rotating through various medical units. Students will create, compose, key, retrieve, revise, and transcribe from simple to complex documents.	3	3	0
OST 1257 MEDICAL TERMINOLOGY FOR THE OFFICE For medical office employees. Covers basic word-building system for defining, pronouncing, spelling, and using medical words. Programmed text and audio tapes on which professionals pronounce medical words correctly allow students to develop vocabulary at own pace.	2	2	0	OST 1467 INTRODUCTION TO BODY SYSTEMS FOR OST Prerequisite: OST 1257. Previous keyboarding, word processing and document processing experience strongly recommended. This course introduces the student to the structure and functions of the human body. Students will explore the body systems, laboratory tests, principles of pharmacology, routes of administration, classes of drugs, types of blood products, immunization, the disease process, surgical techniques, and instrumental and operative procedures. Students will learn sufficient anatomy and physiology to work in a medical setting.	3	3	0
OST 1304 USING OFFICE REFERENCE MANUALS Trains students to locate in office reference manual rules that apply to most business writing. Refresher course in punctuation, spelling, grammar, and letter, memo and report format.	1	1	0	OST 1601 MACHINE TRANSCRIPTION Previous keyboarding, word processing and document processing experience strongly recommended. Emphasizes development of competent machine transcription skills as applied to various types of businesses and production of mailable business letters and documents. Includes comprehensive program of basic language skills with grammar, punctuation, spelling, proofreading and editing.	3	3	0
OST 1305 PROOFREADING Proofreading of original, revised or corrected documents for content and consistency, style, format, typographical errors, capitalization, grammar, punctuation, and spelling. Also covers proofreading of statistical material.	1	1	0	OST 1611 MEDICAL TRANSCRIPTION Prerequisite: OST 1467. Emphasizes fundamentals of transcribing simple medical reports and correspondence using transcribing machines. (Special Fee: \$25.00)	3	3	0
OST 1320 TEN KEY MASTERY Students will learn the numeric keypad by touch and develop the speed and accuracy necessary to skillfully apply this knowledge to a variety of data entry situations: data entry employment, on-line, point-of-sale entries, spreadsheet, accounting, and other numeric computer-related applications. This skill will easily transfer to the ten key calculator for those students for whom speed and accuracy are necessary	1	1	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
OST 1742 SOFTWARE UPDATE (WORD PROCESSING SPREADSHEETS, PRESENTATIONS, DATABASE AND DESKTOP PUBLISHING) Prior completion of a three-credit course in the appropriate software is recommended. This course is designed to assist users in updating from one version of a word processing, spreadsheet, presentations, database or desktop publishing software to the subsequent version. It will cover basic everyday functions and does not take the place of a full three-credit course.	1	1	0	OST 2252 LEGAL TERMINOLOGY For legal office employees. Covers definition, pronunciation, spelling, and use of legal words. Provides students with a broad legal vocabulary, useful in any law-related field. Programmed text allows students to develop vocabulary at own pace.	2	2	0
OST 1743 ELECTRONIC WRITING I Students will learn to use a word processing program to key compositions for college courses. They will learn the basics of the computer, how to start the program, use proper cursor movement, how to create, name, save, open, and exit a basic document; check and correct spelling, use the thesaurus/grammar checker; show codes; underline; boldface; print; center; insert; replace; move; copy; find and change text; delete and undelete; format a document by changing fonts, margins, tabs, line spacing, justification, hyphenation, and indenting.	1	1	0	OST 2311 COREL QUATTRO PRO (SPREADSHEET) This course covers the basic principles of computers and their use in business using Corel Quattro Pro. Students will learn to create, modify, and chart spreadsheet data.	1	1	0
OST 1744 ELECTRONIC WRITING II Prerequisite: OST 1743. Students will use features they learned in Electronic Writing I and will learn to use advanced features of word processing. They will learn to format pages by setting top and bottom margins, creating headers and footers, setting page numbers, page breaks, and centering pages. Students will also learn to create page, paragraph, character and column borders. They will create watermarks and text boxes, newspaper and parallel columns, and learn how to use the automatic outline and paragraph numbering feature. Finally, students will learn how to create a table of contents and an index.	1	1	0	OST 2312 MICROSOFT EXCEL - LEVEL I Beginning/Intermediate (CORE) spreadsheet course. Students will learn to create, format, modify, and print worksheets. Students also will learn to draw objects and use spreadsheet data in ranges, functions and charts.	1	1	0
OST 1745 ELECTRONIC WRITING III Prerequisite: OST 1744. Covers word processing advanced features for producing research papers and personal documents: outlines, footnotes and endnotes, tables, tables of contents, indexes, lists, graphics for desktop publishing and importing into document files.	1	1	0	OST 2315 MICROSOFT WORD - LEVEL I Keyboarding experience is strongly recommended. Beginning/Intermediate (CORE) word processing course. Students will learn to process, edit, and format text and paragraphs; to use headers, footers, and sections; to use styles, templates, and writing tools; and print and manage files. Students also will create tables, outlines, drawing objects, and columns.	1	1	0
OST 2120 OFFICE SYSTEMS SIMULATION Prerequisite: OST 2319 or OST 2706. Provides the student with the experience of working in a company and performing all tasks assigned to an executive secretary within that firm. As an executive secretary and/or administrative assistant, the student will assist with correspondence, meetings, client presentations, travel arrangements, and office organization. In addition, the student will represent the employer in a variety of situations.	2	2	0	OST 2316 MICROSOFT WORD - LEVEL 2 Prerequisite: OST 2315 or OST 2706. Intermediate/Advanced (expert) word processing course. Students will learn to use advanced aspects of formatting features, headers, footers, and columns; use watermarks, footnotes, endnotes, charts, and workgroup editing. Students also will use graphics, macros, mail merge, and sort.	3	3	0
				OST 2318 MICROSOFT EXCEL - LEVEL 2 Prerequisite: OST 2312 or OST 2706. Intermediate/Advanced (expert) spreadsheet course. Students will learn to apply special or custom formatting and to sort and query data from lists; audit worksheets; use macros, templates, and multiple workbooks; and import and export data. Students also will learn to use database features; extract and filter data; and use data analysis, pivot tables, data validation, data map, and condition formatting.	3	3	0
				OST 2319 COREL WORDPERFECT SUITE (APPLICATIONS SOFTWARE PACKAGE) This course covers the basic principles of computers and their use in business using the Corel WorkPerfect Suite Applications Software Package. Students will learn to use Corel WordPerfect to create and edit word processing documents; QuattroPro, to create, modify, and chart spreadsheet data; and Presentations, to create a professional slide show presentation. The course will also include basic windows functions.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
OST 2339 CHANGES IN BUSINESS CORRESPONDENCE Provides OST graduates with updates in the preparation of business documents.	1	1	0	OST 2442 LITIGATION TERMINOLOGY AND LEGAL SECRETARIAL PROCEDURES Prerequisite: OST 2432. A course in litigation specifically for legal secretaries. Includes special terminology, litigation document production, formatting, and secretarial procedures used in this specialty.	2	2	0
OST 2359 RECORDS MANAGEMENT SIMULATION Prerequisite: OST 1335 and Current Database Management Software Course. Students will act as a Records Manager in simulated offices and implement pertinent guidelines for the establishment and maintenance of records control programs for organizations ranging from small businesses to large corporations and government. They will use ARMA filing rules to electronically design, update and manage files, create reports, prepare requisitions and follow charge-out and transfer procedures.	3	3	0	OST 2443 ESTATE PLANNING/GUARDIANSHIP TERMINOLOGY AND LEGAL SECRETARIAL PROCEDURES Prerequisite: OST 2432. A course in estate planning/guardianship specifically for legal secretaries. Includes special terminology, estate planning/guardianship document production, formatting, and secretarial procedures used in this specialty.	2	2	0
OST 2431 LEGAL OFFICE PROCEDURES I Prerequisite: OST 2252 and a current OST word processing course. Basic course designed for students who have little or no law office experience. Covers fundamental principles in general legal practice, legal terminology, and law office routines.	3	3	0	OST 2444 FAMILY LAW TERMINOLOGY AND LEGAL SECRETARIAL PROCEDURES Prerequisite: OST 2432. A course in family law specifically for legal secretaries. Includes special terminology, family law document production, formatting, and secretarial procedures used in this specialty.	2	2	0
OST 2432 LEGAL OFFICE PROCEDURES II Prerequisite: OST 2431. Continuation of Legal Office Procedures I including legal terminology and law office routines. More intensive practice in preparing and distributing court and non-court documents in specialized fields of law.	3	3	0	OST 2445 CONTRACT LAW TERMINOLOGY AND LEGAL SECRETARIAL PROCEDURES Prerequisite: OST 2432. A course in contracts specifically for legal secretaries. Includes special terminology, contracts document production, formatting, and secretarial procedures used in this specialty.	2	2	0
OST 2434 LEGAL OFFICE SIMULATION Prerequisite: OST 2432. Provides students with the classroom experience of performing realistic administrative duties within an attorney's office. Students will work in a simulated legal office rotating through various legal departments. Students will create, compose, key, retrieve, revise, and transcribe from-simple-to-complex legal documents.	2	2	0	OST 2450 ICD - 9 CODING Prerequisite: OST 1257. This course introduces students to the numeric International Classification of Diseases (ICD) and the importance of identifying proper codes to facilitate payment for health services. Also teaches specific areas of ICD and how to use medical charts to identify primary/secondary diagnoses and to code billing forms.	3	3	0
OST 2440 FLORIDA COURT SYSTEM TERMINOLOGY AND LEGAL SECRETARIAL PROCEDURES A course in Florida court system specifically for legal secretaries. Includes special terminology, Florida court system document production, formatting, and secretarial procedures used in this specialty.	1	1	0	OST 2453 CPT - 4 MEDICAL CODING Prerequisite: OST 2450. Teaches the importance of the relationship between ICD-9-CM codes and CPT 4 (Current Procedural Terminology) in assuring accurate coding and reimbursement. Also examines medical records to determine primary and secondary procedures; teaches ICD 9-CM codes and CPT 4 codes unique to medical specialty areas; introduces students to RBRVS codes and their importance in billing Medicare; and presents importance of individual payer coding requirements.	3	3	0
OST 2441 BANKRUPTCY TERMINOLOGY AND LEGAL SECRETARIAL PROCEDURES Prerequisite: OST 2432. A course in bankruptcy specifically for legal secretaries. Includes special terminology, bankruptcy document production, formatting, and secretarial procedures used in this specialty.	2	2	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
OST 2464 MEDISOFT (OFFICE MANAGEMENT SOFTWARE) The Medisoft program prepares a medical office assistant to work as an administrative assistant in a health care practice. It provides training for input to patient information, appointment scheduling and billing. Students also will produce various lists and reports and learn to handle insurance claims.	2	2	0	OST 2616 RADIOLOGY TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialty of radiology.	2	2	0
OST 2469 MEDICAL MANAGER (OFFICE MANAGEMENT SOFTWARE) The Medical Manager program prepares a medical office assistant to work as an administrative assistant in a health care practice. It provides training for input to patient information, appointment scheduling and billing. It includes procedure codes and math calculations for all accounting records, billings, and reports for the medical office.	2	2	0	OST 2617 PATHOLOGY TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialty of pathology.	2	2	0
OST 2501 OFFICE MANAGEMENT I Designed for student who plans to advance into management area of office support. Covers office environment, ergonomics in office, leadership training, office productivity, automation and advanced office systems. Includes management of human resources, budgets and cost control, feasibility studies and ethics in business.	3	3	0	OST 2619 GENERAL MEDICINE TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialty of general medicine.	2	2	0
OST 2502 OFFICE MANAGEMENT II Prerequisite: OST 2501. This course prepares students to function as, and to manage, office support staff and to manage facilities and services within a centralized/decentralized word processing/transcription unit in terms of delegation of tasks, training and managing subordinates, meeting priorities and deadlines, and managing time.	3	3	0	OST 2621 LAW OFFICE TRANSCRIPTION Prerequisite: OST 2432. Emphasis on development of competent machine transcription skills as applied to legal field and production of mailable business letters, court, and non-court documents. Includes a comprehensive program of basic language arts skills which consists of grammar, punctuation, spelling, proofing/reading, and editing.	2	2	0
OST 2503 OFFICE SYSTEMS MANAGEMENT SIMULATION Prerequisite: OST 2502 Office Management II. This course provides the student with the experience of working in a simulated company and performing all the duties assigned to the Office Support Manager. The student will learn to identify organization charts and work within one, delegate tasks, understand the role of labor unions, learn to motivate employees and maintain morale, make decisions, train and manage subordinates, insure that priorities and deadlines are met, conduct ergonomic studies, and determine if a centralized or decentralized word processing unit is needed—then create the unit and manage it on a day-to-day basis.	2	2	0	OST 2650 OTORHINOLARINOLOGY/OPHTHALMOLOGY TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialties of otorhinolarinology/ophthalmology.	2	2	0
OST 2614 CARDIOLOGY TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialty of cardiology.	2	2	0	OST 2651 GASTROENTEROLOGY/UROLOGY TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialties of gastroenterology/urology.	2	2	0
OST 2615 ORTHOPEDIC TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialty of orthopedic.	2	2	0	OST 2652 OBSTETRICS AND GYNECOLOGY TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialties of obstetrics and gynecology.	2	2	0
				OST 2653 PULMONARY MEDICINE/NEUROLOGY TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialties of pulmonary medicine/neurology.	2	2	0
				OST 2654 DERMATOLOGY TRANSCRIPTION Prerequisite: OST1611. This is an advanced course in machine transcription of specialized authentic physician-dictated reports in the medical specialty of dermatology.	2	2	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
OST 2659 ENDOCRINOLOGY TRANSCRIPTION Prerequisite: OST 1611. This advanced course teaches machine transcription of authentic physician-dictated reports in the medical specialty of endocrinology.	2	2	0	OST 2828 MICROSOFT POWERPOINT (PRESENTATION SOFTWARE) Beginning/intermediate presentation course. Students will learn to create, modify, customize, and deliver a PowerPoint slide presentation. Students also will create or use drawing objects, charts, and templates; prepare speaker notes, add sound or import from other sources; and use delivery and navigation tools.	1	1	0
OST 2706 MICROSOFT OFFICE (APPLICATIONS PACKAGE) Beginning/Intermediate office application course. Students will learn Microsoft Office in a Windows environment and its use in business including Word for creating and editing word processing documents, Excel for creating spreadsheets, Access for creating databases, and PowerPoint for creating professional slide show presentations.	3	3	0	OST2831 MICROSOFT WINDOWS (OPERATING SYSTEM) Covers the basic principles of computers and their use in business. Students get hands-on experience using Windows. Article reviews on current operating systems will be discussed and compared. Operating system features such as the clipboard, file management/explorer, and accessories will be discussed.	1	1	0
OST 2711 WORDPERFECT FOR WINDOWS (WORD PROCESSING) Covers specific functions of WordPerfect for Windows for word processing software on the PC. Students use various features of the program to input, edit, store, and output data. Includes basic and advanced functions, including copy, move, style, columns, merge, sort, tables, graphics and desktop publishing.	3	3	0	OST 2835 BASIC MICROSOFT ACCESS (DATABASE) Beginning/Intermediate database course. Students will learn to plan, create, modify and organize a database. Students also will learn to sort or select records and use forms and reports.	1	1	0
OST 2741 COREL WORDPERFECT (WORD PROCESSING) This course covers the basic principles of computers and their use in business using Corel WordPerfect. Students will learn to use Word to create and edit word processing documents.	1	1	0	OST 2836 MICROSOFT ACCESS (DATABASE MANAGEMENT SOFTWARE) Beginning/Intermediate/Advanced (expert) database course. Students will learn to plan, create, modify, and organize a database. In addition, students will use forms and will chart, sort, query, and analyze database records; create relational databases; and create, customize, and modify reports. Word or Excel experience strongly recommended. (Special Fee: \$25.00)	3	3	0
OST 2794 INTERNET FOR OFFICE EMPLOYEES A business-oriented Internet class which covers all of the major access routes for using resources on the Internet including E-mail, Telnet, Anonymous FTP, E-mail group, discussion, Usenet, Archie, Gopher, WAIS, and World Wide Web. Also covered will be the legal, ethical and social issues involving the use of the Internet and Internet files. The class will focus on finding and using the business resources available on the Internet. Students must have access to a computer and modem, have a service provider, and have a Graphical User Interface for accessing the Internet and World Wide Web. After an orientation session at the beginning of the semester, all class work will be done through the Internet and E-mail.	3	3	0	OST 2930 SELECTED TOPICS IN OFFICE SYSTEMS TECHNOLOGY For students interested in acquiring knowledge and skills in areas not included in other office systems technology courses. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
OST 2821 PAGEMAKER (DESKTOP PUBLISHING) Covers operation of PageMaker software for office support personnel. Emphasis on creating office publications such as flyers, newsletters, bulletins, in-house brochures, transparency masters, and covers for reports. Students learn elements of desktop publishing features of PageMaker software, working with Windows environment and importing graphics into PageMaker documents.	3	3	0	OST 2942 INTERNSHIP IN THE LAW OFFICE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including OST 2434 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
OST 2827 COREL PRESENTATION (PRESENTATION SOFTWARE) This course covers the basic principles of computers and their use in business using the Corel Presentation. Students will learn to create a professional slide show presentation.	1	1	0	OST 2943 INTERNSHIP IN THE MEDICAL OFFICE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including OST 1461 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
OST 2944 INTERNSHIP IN OFFICE SYSTEMS TECHNOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including OST 1110 and OST 2706 with at least a 3.0 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		PLA 2516 REAL PROPERTY II Prerequisite: PLA 1506. Study of real estate financing; settlements and closing; landlord/tenant law; condominiums, cooperatives, and PUDs. Stresses practical applications.	3	3	0
Paralegal Studies (Legal Assisting)				PLA 2606 WILLS, TRUSTS AND ESTATE ADMINISTRATION I In-depth analysis of Florida Probate Code as basic substantive law which governs wills, trusts and estate administration in Florida.	3	3	0
PLA 1105 LEGAL RESEARCH AND THEORY I An introduction to the legal system and to the law library system. Students learn to research and cite all primary and secondary sources on both the state and federal levels.	3	3	0	PLA 2626 WILLS, TRUSTS AND ESTATE ADMINISTRATION II Prerequisite: PLA 2606. Stresses application of Florida Probate Code to process will preparation and probate; trust preparation and administration; and administration of estates with emphasis on teaching practical skills which enable student to assist lawyers in wills, trusts and estate administration work.	3	3	0
PLA 1115 LEGAL RESEARCH AND THEORY II Prerequisites: ENC 1101, OST 1335, PLA 1105 and PLA 2207. Study of legal analysis and legal writing. Students prepare letters, memorandums, and memorandums of law which analyze both statutory and case law.	3	3	0	PLA 2793 LEGAL TECHNOLOGY This course is designed to assist students in developing analytical and technological skills so as to enable them to logically approach the application of computer technology to the field of law.	3	3	0
PLA 1506 REAL PROPERTY I Survey of Florida real property law, including classification of interests in real property; methods of acquiring ownership in real property; ownership interests; surveys and land descriptions; encumbrances of real property; easements and licenses; buying and selling real property; deeds of conveyance; recording systems; title abstracting and title insurance. Stresses practical application.	3	3	0	PLA 2803 FAMILY LAW Study of elements of valid marriage, grounds for divorce, dissolution and annulment, property rights and tax consequences; Florida law concerning children, parental support, adoption and guardianship.	3	3	0
PLA 2207 CIVIL LITIGATION I Focuses on litigation process as related to court system of Florida. Attention to function of law, role of attorney, basic substantive law, pleadings, discovery, trial, settlement and appeal.	3	3	0	PLA 2942 INTERNSHIP IN LEGAL ASSISTING Prerequisites: Satisfactory completion of required college-preparatory courses. Internship is to be taken in last semester of the Legal Assisting Program or with departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
PLA 2223 CIVIL LITIGATION II Prerequisite: PLA 2207. Includes in-depth study of Florida Rules of Civil Procedure, Florida Appellate Rules and Florida Rules of Summary Procedure. Stresses teaching of practical skills which enable student to assist lawyers in commencement of lawsuit, discovery, settlement, trial, appeal and collection of judgments.	3	3	0	Philosophy			
PLA 2433 BUSINESS ORGANIZATIONS Emphasis on primary entities under which business is conducted in Florida: sole proprietorship, partnership and limited partnership, limited liability companies, joint ventures and corporations. Compares and contrasts all entities with an emphasis on practical application.	3	3	0	PHI 2010 PHILOSOPHY Contemporary problems introduce major areas of philosophy: metaphysics, ethics, aesthetics, theories of knowledge and philosophy of religion. Students explore writings of notable philosophers, past and present, and examine how their ideas have shed light on problems and their relevance to modern life.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
PHI 2600 ETHICS Study of major theoretical principles on which claims to good life and moral action have been based, such as hedonism, utilitarianism and rationalism. Each theory illustrated by representative selections from works of great philosophers from classical period to 20th century.	3	3	0	PSC 2121 SELECTED TOPICS IN PHYSICAL SCIENCE Prerequisite: Departmental approval. Selected topics in physical sciences based on historical, traditional or contemporary approach, as background and interests of students and professor dictate. May be repeated for credit, but grade forgiveness cannot be applied.	1-3	1	9
PHI 2604 CRITICAL THINKING AND ETHICS Introduction to critical thinking skills taught in the context of the examination of ethical theory. The theory and skills will be applied to cases related to the health care field; for example, issues of patients' rights, allocation of limited medical resources, codes of professional ethics, etc.	3	3	0	PSC 2941 INTERNSHIP EXPLORATION IN EARTH AND PHYSICAL SCIENCE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits hours or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
Photography				Physics			
PGY 2401C PHOTOGRAPHY I Introduction to black and white photography with emphasis upon use of camera, darkroom procedures of developing, printing, and study of visual design in photography. Student must supply a camera, which should have adjustable lens and shutter speeds, and some other materials. (Special Fee: \$25.00)	3	3	3	PHY 1007C PHYSICS Prerequisite: MAC 1102 or MAC 1105 or two years of high school algebra. One-semester course for health-related majors. Survey of topics in physics related to health field. Applications of physics to principles of mechanics, heat, light, sound, electricity and magnetism, and radioactivity as they apply to health field. May not be taken for credit subsequent to receiving grade of C or better in any higher physics course. (Special Fee: \$25.00)	4	3	3
PGY 2410C PHOTOGRAPHY II Prerequisite: PGY 2401C. Continuation of PGY 2401C with emphasis on imagery, content and refinement of techniques of medium. (Special Fee: \$25.00)	3	3	3	PHY 1053C INTRODUCTORY PHYSICS I Prerequisite: High school trigonometry with a minimum grade of C or MAC 1114 or MAC 1147. Fundamental principles of mechanics, heat and sound. For students whose requirements for baccalaureate degree include basic courses in physics. (Special Fee: \$25.00)	4	3	3
PGY 2930 SELECTED TOPICS IN PHOTOGRAPHY Prerequisite: Departmental approval. Selected topics in photography based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable		PHY 1054C INTRODUCTORY PHYSICS II Prerequisite: PHY 1053C. Fundamental principles of electricity, magnetism, optics and elements of modern physics. For students whose requirements for baccalaureate degree include basic course in physics. (Special Fee: \$25.00)	4	3	3
Physical Education See Health for course descriptions.				PHY 2048C GENERAL PHYSICS WITH CALCULUS I Prerequisite: MAC 2311. Fundamental principles of mechanics, heat, and sound. For physics, mathematics, chemistry, and pre-engineering majors. (Special Fee: \$25.00)			
Physical Science				PHY 2049C GENERAL PHYSICS WITH CALCULUS II Prerequisite: PHY 2048C. Fundamental principles of electricity, magnetism, and optics. For physics, mathematics, chemistry and pre-engineering majors. (Special Fee: \$25.00)			
PSC 1101C FUNDAMENTALS OF PHYSICAL SCIENCE Designed to meet the general education requirements for the technical or non-science major. Students study fundamental physical concepts such as force and motion, thermodynamics, electromagnetics, properties of solids and fluids, propagation of sound, and behavior of light and apply these principles to everyday life. (Special Fee: \$25.00)	4	3	3				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
PHY 2101 MODERN PHYSICS Prerequisites: One year each of college physics and calculus. Special relativity, optical and X-ray spectra, interaction and duality of particles and radiation, basic concepts of quantum mechanics, atomic and molecular structures, introductory solid state and elementary nuclear and particle physics.	3	3	0	POS 2112 STATE AND LOCAL GOVERNMENT In-depth study of state, county and municipal government with emphasis on contemporary problems.	3	3	0
PHY 2936 SELECTED TOPICS IN PHYSICS Prerequisites: PHY 1053C or PHY 2048C and departmental approval. For student in science who desires in-depth study of special topics in classical and modern physics. Includes experimental topics upon demand. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		POS 2930 SELECTED TOPICS IN POLITICAL SCIENCE Prerequisite: POS 2041 or departmental approval. For students interested in exploring special topics in political science through research, discussion and observation. May be repeated for credit, but grade forgiveness cannot be applied.	1-3	1-3	0
PHY 2941 INTERNSHIP EXPLORATION IN PHYSICS Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including PHY 2048C, MAC 2311 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		POS 2941 INTERNSHIP EXPLORATION IN POLITICAL SCIENCE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including POS 2041 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
Political Science				Portuguese			
INR 2002 INTERNATIONAL POLITICS Prerequisite: ENC 1101 or 1101H. Discussion of topics relating to international politics: nationalism, armaments, imperialism, militarism, history of international politics, foreign policies, international law and organization, United Nations, human factor in international politics. Gordon Rule course which requires 6,000 words of writing. Minimum grade of C required if INR 2002 is used to satisfy Gordon Rule and general education requirements.	3	3	0	POR 1000 BASIC PORTUGUESE Emphasizes everyday use of Portuguese. Beginning level course for students with no prior exposure to the language. Introduces basic vocabulary, grammar and composition.	3	3	0
INR 2002H INTERNATIONAL POLITICS - HONORS Same as INR 2002 with honors content. Honors program permission required.	3	3	0	POR 1100 ELEMENTARY PORTUGUESE I Prerequisite: POR 1000, two years of high school Portuguese, or departmental approval. For students with basic communicative competence in Portuguese. Hones language skills and understanding of Lusa-Brazilian cultures, acquiring fundamentals of comprehension, expression and structure.	3	3	0
POS 2041 U. S. GOVERNMENT Theory, organization, principles and functions of national government, stressing relationships of individual to all levels of government in political system. This course includes learning activity designed to ensure competence in the basic use of computers.	3	3	0	POR 1101 ELEMENTARY PORTUGUESE II Prerequisite: POR 1100 or departmental approval. Continuation of POR 1100.	3	3	0
POS 2041H U. S. GOVERNMENT - HONORS Same as POS 2041 with honors content. Honors program permission required.	3	3	0	POR 2930 SELECTED TOPICS IN PORTUGUESE Seminars for students interested in exploring special topics in Portuguese. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
Postal Service Management				Postal Service Management			
				MNA 1391 INTRODUCTION TO POSTAL MANAGEMENT Provides students with overall working knowledge of management responsibilities in five postal functional areas: customer service, finance, employee and labor relations, mail processing, and delivery services.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
MNA 1392 POSTAL MANAGEMENT DELIVERY SERVICES Provides students with working knowledge of postal-related customer services, such as retail operations, sales, and consumer services.	3	3	0	Psychology			
MNA 1393 POSTAL MANAGEMENT CUSTOMER SERVICE Provides students with working knowledge of the postal-related customer services, such as retail operations, sales, and consumer services.	3	3	0	CLP 1002 PSYCHOLOGY OF ADJUSTMENT Biology and learned factors involved in processes of personal and social adjustment and study of mental health principles and their application to human adjustment.	3	3	0
MNA 1395 MAIL PROCESSING I Covers mail classifications and rates; service standards; postal terminology; four functions of mail processing; distribution systems; mail processing objectives and responsibilities; mail preparation; manual distribution; revenue protection; and bulk mail centers.	3	3	0	CLP 2140 ABNORMAL PSYCHOLOGY Prerequisite: PSY 1012. Psychological abnormality discussed with reference to symptom patterns, causation and treatment approaches.	3	3	0
MNA 2300 PERSONNEL MANAGEMENT Personnel management and practices with emphasis on techniques of recruiting, selecting, transferring, promoting, classifying and training workers.	3	3	0	DEP 1302 PSYCHOLOGY OF ADOLESCENCE Study of adolescent development from a multi-disciplinary viewpoint. Emphasizes social, physical and emotional development; adolescent problems including delinquency and drugs; learning problems and factors affecting life and vocational/career choices.	3	3	0
MNA 2340 BASIC SUPERVISION Study of supervisory function, decision making and responsibilities of supervision. Also conflict areas of employees and supervisors.	3	3	0	DEP 2004 DEVELOPMENTAL PSYCHOLOGY Prerequisite: PSY 1012. Designed to survey theory and research on development from conception through death. Emphasizes biological and social variables which influence human behavior.	3	3	0
MNA 2394 POSTAL FINANCE Explores areas of how postal revenue is received and controlled. Procedures of Board of Governors' and Postmaster General's Annual Report and an explanation of three major sources of postal revenue. Also covers financial accounting and reporting, time keeping, and travel regulations.	3	3	0	DEP 2004H DEVELOPMENTAL PSYCHOLOGY - HONORS Same as DEP 2004 with honors content. Honors program permission required.	3	3	0
MNA 2396 MAIL PROCESSING II Covers postal mechanization; machine distribution; human resources management in mail processing; reporting systems and data analysis; operation planning; scheduling and staffing; budgeting and functional coordination with customer services.	3	3	0	DEP 2402 ADULT DEVELOPMENT AND AGING This course is designed to give the student information on the theories and processes of aging in our society today. The tasks of adulthood and behavioral gerontology will be explored in order to increase the student's awareness of issues during this developmental phase.	3	3	0
MNA 2397 POSTAL HUMAN RELATIONS Study of employee and labor relations as it applies to people at work in United States Postal Service. Involves job specifications and structures of interlocking duties and responsibilities together with policies governing those relationships. Presents overview of laws and practices related to labor management in Postal Service. Emphasis on national and local agreements, various bargaining units and associations in U.S. Postal Service, grievance procedures, disciplinary action procedures, and National Labor Relations Board.	3	3	0	EDP 2002 EDUCATIONAL PSYCHOLOGY Study of psychological principles and how they apply to educational process. Major areas: principles of learning, individual differences, motivation, mental abilities, measuring outcomes of learning and study of teaching - learning situation. Especially designed for prospective teachers.	3	3	0
				INP 1301 PSYCHOLOGY IN BUSINESS AND INDUSTRY Introduction to psychology of human behavior as applied to business and industry. Designed to study psychological factors involved in work situation, including leadership, motivation, communications, morale, organizational structure, personnel selection, training, appraisal and consumer problems.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
PSY 1012 GENERAL PSYCHOLOGY Life-oriented course in psychology, designed to give student factual foundation in techniques and vocabulary of psychology and general understanding of human behavior. Surveys, research and application of psychology in areas of learning, intelligence, motivation, emotion, personality, behavior disorders, mental health and therapy.	3	3	0	RTE 1418C PRINCIPLES OF RADIOGRAPHY I Prerequisite: RTE 1000. Prerequisite or Corequisite: BSC 2094C. Corequisites: RTE 1513C and RTE 1814. Basic principles of radiation, image receptor systems, processing and a study of the factors that govern and influence the production of the radiographic image will be presented. Assignments include written journal article reports. (Special Fee: \$20.00)	2	1	3
PSY 1012H GENERAL PSYCHOLOGY - HONORS Same as PSY 1012 with honors content. Honors program permission required.	3	3	0	RTE 1458 PRINCIPLES OF RADIOGRAPHY II Prerequisite: RTE 1418C. Corequisites: RTE 1523C and RTE 1824. An overall survey of factors affecting the production of high quality radiographs. Manipulation of technical factors and use of accessory devices to produce quality radiographic images will be explored. Quality assurance evaluation methods for radiographic systems will be presented, performed, and orally reported.	3	3	0
PSY 2930 SELECTED TOPICS IN PSYCHOLOGY Prerequisite: PSY 1012. For students interested in exploring special topics in psychology through research, discussion and observation. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		RTE 1503C RADIOGRAPHIC PROCEDURES I Prerequisite: BSC 1010C. Corequisites: RTE 1000, HSC 1230C and RTE 1804. A study of patient habitus, positioning, equipment manipulation, and radiographic quality evaluation of the chest, abdomen, and upper extremity. Emphasis is placed on critical thinking and communication skills related to procedure performance, patient care and radiation protection. Assignments include a minimum-1500-word research paper. (Special Fee: \$44.00)	3	2	3
PSY 2941 INTERNSHIP EXPLORATION IN PSYCHOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including PSY 1012 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		RTE 1513C RADIOGRAPHIC PROCEDURES II Prerequisite: RTE 1503C. Corequisites: RTE 1418C and RTE 1814. A study of patient positioning, equipment manipulation and radiographic quality evaluation of the lower extremity, spine, and skull. Emphasis is placed on critical thinking and communication skills related to procedure performance, patient care and radiation protection. (Special Fee: \$40.00)	4	3	3
SOP 2772 HUMAN SEXUALITY Prerequisite: PSY 1012 or SYG 2000. Study of sexuality with emphasis on subjects such as identity and behavior, characteristics of sexual beings and meaning of sexuality. Includes study of sexual health, sexual decision-making and strategies for dealing with conception, sexually transmitted diseases and sexual coercion and exploitation.	3	3	0	RTE 1523C RADIOGRAPHIC PROCEDURES III Prerequisite: RTE 1513C. Corequisites: RTE 1458 and RTE 1824. A study of patient positioning, equipment manipulation and radiographic quality evaluation of contrast procedures of the gastrointestinal and urinary systems. Emphasis is placed on critical thinking and communication skills related to patient care and radiation protection. (Special Fee: \$40.00)	4	3	3
Radiography							
To register for any of the Radiography courses, you must apply and be accepted to the Radiography program.							
RTE 1000 INTRODUCTION TO RADIOGRAPHY Prerequisites or Corequisites: BSC 2093C and HSC 1531. Corequisites: HSC 1230C, RTE 1503 and RTE 1804. An overview of radiography and its role in health care delivery with orientation to academic and administrative structure and to the profession as a whole, including ethical and legal responsibilities, patient consent, hospital and departmental policies, and basic radiation protection principles.	1	1	0	RTE 1804 RADIOGRAPHIC CLINICAL EDUCATION I Prerequisite: BSC 1010C. Corequisites: RTE 1000, HSC 1230C and RTE 1503C. Supervised clinical experience and competency evaluation of professional interaction and performance of routine radiographic procedures with emphasis on radiation protection, patient care, equipment orientation, radiographic technique, image processing procedures and image quality evaluation. (Special fee: \$20.00)	1	0	8

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
RTE 1814 RADIOGRAPHIC CLINICAL EDUCATION II Prerequisite: RTE 1804. Corequisite: RTE 1513C. Continuation of supervised clinical experience and competency evaluation of professional interaction and performance of routine radiographic procedures with emphasis on radiation protection, patient care, equipment operation, radiographic technique, image processing procedures and image quality evaluation. (Special Fee: \$40.00)	2	0	16	RTE 2782 RADIOGRAPHIC PATHOLOGY Prerequisite: RTE 1523C. Corequisites: RTE 2533 and RTE 2834. Course content will provide student with an introduction to the concept of disease. The relationship of pathology and disease to various radiographic procedures will be discussed. Assignments will include an oral case presentation.	3	3	0
RTE 1824 RADIOGRAPHIC CLINICAL EDUCATION III Prerequisite: RTE 1814. Corequisite: RTE 1523C. Continuation of supervised clinical experience and competency evaluation of professional interaction and performance of routine radiographic procedures with emphasis on radiation protection, patient care, equipment operation, radiographic technique, image processing procedures and image quality evaluation. (Special Fee: \$40.00)	2	0	16	RTE 2942 INTERNSHIP IN RADIOGRAPY Prerequisites: Satisfactory completion of required college-preparatory courses, second-year standing in Radiography degree program and departmental approval. This course is an occupational-specific work experience designed to allow radiography students to make practical applications of theory taught in the classroom. It allows students to develop work habits that lead to success in the workplace. (Internship Fee: \$65.00)	1 - 4	variable	
RTE 2061 RADIOLOGIC SEMINAR Prerequisite: RTE 2563. Corequisite: RTE 2854. This course is designed to provide a forum for student research and review of all aspects of radiography.	3	3	0	RTE 2834 RADIOGRAPHIC CLINICAL EDUCATION IV Prerequisite: RTE 1824. Corequisite: RTE 2533. Continuation of supervised clinical experience and competency evaluation of professional interaction and performance of routine radiographic procedures with emphasis on radiation protection, patient care, equipment operation, radiographic technique, image processing procedures and image quality evaluation. (Special Fee: \$60.00)	3	0	24
RTE 2385 RADIATION BIOLOGY AND PROTECTION Prerequisite: BSC 1010C. Corequisites: RTE 2563 and RTE 2844. Study of effects of ionizing radiation on biologic systems. Investigates responses at cellular and total organism level. Presents protection measures and regulations for all types of ionizing radiation.	2	2	0	RTE 2844 RADIOGRAPHIC CLINICAL EDUCATION V Prerequisite: RTE 2834. Continuation of supervised clinical experience and competency evaluation of professional interaction and performance of routine radiographic procedures with emphasis on radiation protection, patient care, equipment operation, radiographic technique, image processing procedures and image quality evaluation. (Special Fee: \$60.00)	3	0	24
RTE 2533 RADIOGRAPHIC PROCEDURES IV Prerequisite: RTE 1523C. Corequisites: RTE 2834 and RTE 2782. A study of patient procedures and radiographic quality evaluation for semi-special vascular and nonvascular procedures including mammography, conventional tomography, computed tomography and magnetic resonance imaging. Emphasis is placed on critical thinking skills as related to procedure performance, patient care and radiation protection. Written communication skills are demonstrated through preparation of journal article reports and a research paper.	2	2	0	RTE 2854 RADIOGRAPHIC CLINICAL EDUCATION VI Prerequisite: RTE 2844. Continuation of supervised clinical experience and competency evaluation of professional interaction and performance of routine radiographic procedures with emphasis on radiation protection, patient care, equipment operation, radiographic technique, image processing procedures and image quality evaluation. (Special Fee: \$60.00)	3	0	24
RTE 2563 PRINCIPLES OF RADIOGRAPHY III Prerequisite: RTE 1458. Corequisites: RTE 2385 and RTE 2844. A study of the physical principles and application of imaging equipment; radiographic/fluoroscopic, computed tomography, digital imaging, magnetic resonance imaging, and radiology departmental computerization. Assignments include written journal article reports.	4	4	0	RTE 2930 SELECTED TOPICS IN RADIOGRAPHY Prerequisite: Departmental approval. Selected topics in radiography based on the needs and areas of interest of the class and professor. May include laboratory work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Reading							
REA 0001 COLLEGE-PREPARATORY READING I Prerequisite: Appropriate score on CPT or other approved assessment. Corequisite: REA 0001L. Study of literal and critical comprehension skills with emphasis on literal skills and organization patterns of information. Includes strategies for vocabulary development. Minimum grade of C required for successful completion. Upon successful completion, degree-seeking student must take REA 0002 and REA 0002L. REA 0001 credit does not apply toward any associate degree. (Special Fee: \$25.00)	3	3	2	REA 1620 STUDY SKILLS FOR COLLEGE Series of courses designed to improve textbook study, reading ability, time management, and critical thinking and problem-solving skills. Includes study skills for college survival, test-taking and critical reading and thinking. May be taken for one, two, or three credits as arranged with professor. Sample mini courses include time control; study-reading college textbooks; notetaking on textbook reading- underlining, outlining, summarizing, mapping, memory improvement; listening to and taking notes on lectures; preparing for and taking examinations; reducing test anxiety; graph, map and chart reading; critical reading; creative thinking and problem-solving.	1-3	1-3	0
REA 0001L COLLEGE-PREPARATORY READING LAB Corequisite: REA 0001. Lab component of REA 0001.	0	0	2	REA 2930 SELECTED TOPICS IN READING Seminar for students interested in research, discussion, and observation of special topics in reading. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
REA 0001C COLLEGE-PREPARATORY READING I Same as REA 0001 and REA 0001L with class and lab combined.	3	3	2	REA 2941 Internship Exploration in Reading Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including (ENC 1101 or REA 1106) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
REA 0002 COLLEGE-PREPARATORY READING II Prerequisite: Minimum grade of C in REA 0001 and REA 0001L or appropriate score of on CPT or other approved assessment. Corequisite: REA 0002L. Review and reinforcement of skills covered in REA 0001 and REA 0001L. Emphasis on additional critical comprehension skills. Strategies for vocabulary development. Minimum grade of C required for successful completion. Upon successful completion, student has met the reading requirement for entry into ENC 1101. Students who pass with scores equivalent to 83-85 on CPT are strongly encouraged to enroll in REA 1106. REA 0002 credit does not apply toward any associate degree. (Special Fee: \$25.00)	3	3	2	Real Estate			
REA 0002L COLLEGE-PREPARATORY READING II LAB Corequisite: REA 0002. Lab component of REA 0002.	0	0	2	REE 1000 REAL ESTATE PRINCIPLES AND PRACTICES Study of legal and economic aspects of real estate with emphasis on ownership, realty market, instruments of record, mortgages, taxes and government regulations. Students interested in sitting for Florida Real Estate Commission exam must take combined REE 1000 and REE 1400 end-of-course exam and receive grade of 70 percent or better.	3	3	0
REA 0002C COLLEGE-PREPARATORY READING II Same as REA 0002 and REA 0002L with class and lab combined.	3	3	2	REE 1400 FLORIDA REAL ESTATE LAW Introduction to Florida real estate license law and rules and regulations of Florida Real Estate Commission. Legal and ethical principles covered are required knowledge for student entering real estate field and for state real estate license examination. Students interested in sitting for the Florida Real Estate Commission exam must take combined REE 1000 and REE 1400 end-of-course exam and receive a grade of 70 percent or better.	3	3	0
REA 1106 READING SKILLS Prerequisite: Minimum score of 83 on CPT. Reinforcement of comprehension skills and vocabulary development. Emphasis on developing strategies for learning and remembering new words.	3	3	0	REE 2300 REAL ESTATE INVESTMENT Designed to forecast and measure investment yields such as cash flow and profit analysis on real property. Analysis of houses, apartments, shopping centers, office buildings and industrial properties using various investment approaches.	3	3	0
REA 1205 READING SKILLS Prerequisite: REA 1106 or score of 83 on CPT or other state-approved entry test. Designed to assist students with average and above-average reading ability to develop optimal reading skills. Emphasis on increasing reading speed and flexibility; developing thorough, accurate, and critical comprehension, and acquiring precise and extensive vocabulary.	3	3	0				

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
REE 2941 INTERNSHIP EXPLORATION IN REAL ESTATE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including REE 1000 and REE 1400 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		RET 1264C PRINCIPLES OF MECHANICAL VENTILATION Prerequisite: RET 1025C or departmental approval. Functions of advanced respiratory equipment, arterial blood-gas equipment, prolonged mechanical ventilation, bedside respiratory volumetric monitoring, evaluation prior to and during weaning from respiratory support. (Special Fee: \$20.00)	4	3	3
REE 2942 INTERNSHIP IN REAL ESTATE Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including REE 1000 and REE 1400 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		RET 1275C CLINICAL CARE TECHNIQUES Prerequisite: BSC 2093C, RET 1025C. Presents basic principles and essential skills necessary to perform patient care safely and effectively. Includes medical asepsis, terminology, communication, patient assessment and position, medical ethics, and behavioral problems unique to patients with respiratory illness. Orientation to clinical rotation. Student must maintain C through didactic portion to participate in clinical setting. (Special Fee: \$20.00)	4	3	3
Religion				RET 1295C CHEST MEDICINE Prerequisite: BSC 2093C and RET 1025C. Respiratory care students investigate nature and cause of cardiopulmonary diseases that involve changes in structure and function. Presents etiology, clinical manifestations, pathogenesis, lab data and treatment for major chronic and acute pulmonary disease entities. (Special Fee: \$20.00)	4	3	3
REL 2000 UNDERSTANDING RELIGIOUS TRADITIONS Designed for students interested in exploring various ways people have expressed religious views. Explores questions that lead people to formulate religious answers and various religious doctrines that formalize human concerns. Balances different opinions from major religious traditions such as Christianity, Judaism, Hinduism and Buddhism, among others, and helps students broaden perspectives on religion.	3	3	0	RET 1450C BASIC PHYSIOLOGIC MONITORING Prerequisite: RET 1275C. Emphasis on basic diagnostic and monitoring principles used in determining clinical evaluation of patients. Cardiopulmonary assessment using electrocardiography, chest roentgenography and lab test. (Special Fee: \$20.00)	3	2	3
REL 2930 SELECTED TOPICS IN RELIGION Prerequisite: Departmental approval. Selected topics in religion based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable		RET 1485C CARDIOPULMONARY PHYSIOLOGY Prerequisite: BSC 2093C or departmental approval. Includes pulmonary functions: normal ventilation and regulation of respiration, response to gases and ions, lung reflexes and ventilatory and mechanical factors. Also includes pulmonary circulation, gas diffusion, manifestations of disease and blood gas analysis. (Special Fee: \$20.00)	4	3	3
Respiratory Care				RET 1874L CLINICAL PRACTICE I Prerequisite: RET 1275C. Corequisite: Departmental approval. Student assigned clinical tasks in patient floor care under supervision of staff respiratory therapist or clinical instructor. (Special Fee: \$104.00)	4	0	16
RET 1025C PRINCIPLES OF RESPIRATORY CARE Prerequisite: BSC 2093C. Course and laboratory experience designed for beginning respiratory care student. Introduction and working knowledge of state of the art: basic principles of equipment operation and therapeutic objectives for administration of medical gases, humidity, aerosol, therapy modalities and airway management. (Special Fee: \$40.00)	6	3	4	RET 1875L CLINICAL PRACTICE II Prerequisite: RET 1264C, RET 1874L or departmental approval. Student assigned clinical practice in intensive care, cardiac care, progressive care and emergency room units under supervision of staff respiratory therapist or clinical instructor. Emphasis on volume ventilators and advanced patient care, pediatric/neonatal as well as adult. (Special Fee: \$80.00)	4	0	24

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
RET 2244C LIFE SUPPORT Prerequisites: RET 1450C and RET 1264C. Emphasis on advanced cardiopulmonary assessment diagnostic and monitoring techniques. Stresses cardiopulmonary thermodynamics, advanced pulmonary function studies and innovations.	3	2	3	SPA 2614 AMERICAN SIGN LANGUAGE III* Prerequisite: SPA 2613 or departmental approval. Advanced course for students who have previous course work in other manual communication systems but have no extensive background in the grammatical structure and regional idiomatic usage of American Sign Language. The production of non-voiced, conversational, spontaneous signed sentences is the goal of this course. Emphasis on the ability to "read" signed phrases and sentences will be an integral part of the course.	4	4	0
RET 2350 PHARMACOLOGY Prerequisite: BSC 2094C or departmental approval. History of pharmacology, regulatory agencies and regulations concerning use of drugs. Drug action, absorption, distribution and use in human body. Emphasis on respiratory drugs, cardiac drugs and related drugs therapist is exposed to in hospital.	3	3	0	SPA 2615 AMERICAN SIGN LANGUAGE IV* Prerequisite: SPA 2614 or departmental approval. Designed for students who have previous course work in other manual communication systems in the complex grammar, facial expression, metaphorical and idiomatic vocabulary of American Sign Language. Gives students advanced skills in fluent, conversational receptive and expressive American Sign Language. Additional production of non-voiced, conversational, spontaneous signed sentences is the goal of this course. Continued emphasis on the ability to "read" signed phrases and sentences will be an integral part of the course.	4	4	0
RET 2714C PEDIATRIC RESPIRATORY CARE Prerequisite: RET 1264C or departmental approval. Instruction includes the following areas: development and physiology of fetal and neonate lung; perinatal circulation; neonatal pulmonary disorders; treatment of perinatal patients with respiratory care techniques and pediatric respiratory therapy. (Special Fee: \$20.00)	4	3	1	* American Sign Language course work may not satisfy the foreign language graduation requirements at some universities.			
RET 2876L CLINICAL PRACTICE III Prerequisite: RET 1875L, RET 2741C, or departmental approval. Each student assigned clinical tasks and orientation in pulmonary function lab, cardiac catheterization and open heart surgery under supervision of staff respiratory therapist or clinical instructor. Approximately 24 contact hours for every four semester hours credit. (Special Fee: \$80.00)	4	0	24				
RET 2930 SELECTED TOPICS IN RESPIRATORY CARE Prerequisite: Departmental approval. Selected topics in respiratory care based on the needs and areas of interest of the class and the professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3 variable						
Sign Language				Social Science			
SPA 2612 AMERICAN SIGN LANGUAGE I* Introduction to American Sign Language with emphasis on vocabulary used by deaf adults. Includes introduction to history and culture of deafness in America and linguistic structure and conceptual vocabulary of conversational (expressive and receptive) sign language skills. Describes various manual communication systems and philosophies.	3	3	0	AFA 2000 INTRODUCTION TO THE AFRICAN-AMERICAN EXPERIENCE An interdisciplinary examination of the African-American culture as an expression of its African heritage and a response to economic, social, cultural, and political pressures in the New World.	3	3	0
SPA 2613 AMERICAN SIGN LANGUAGE II* Prerequisite: SPA 2612 or departmental approval. Continuation of SPA 2612 emphasizing intermediate level sign vocabulary and use of signing space. Provides greater opportunity for skill development in ASL structure and introduces ASL idioms.	3	3	0	Sociology			
				SYG 1322 JUVENILE DELINQUENCY Introductory overview of field of juvenile delinquency, covering delinquency causation and prevention, juvenile justice system and treatment programs for delinquent youths.	3	3	0
				SYG 1324 SOCIOLOGY OF DRUGS Overview of both licit and illicit drug use. Impact of drug use and abuse on individual and society; possible solutions to problems identified.	3	3	0
				SYG 2000 INTRODUCTORY SOCIOLOGY Enables student to understand social behavior and social processes and become familiar with vocabulary and methodology of discipline of sociology. Emphasis on culture and personality, age and sex roles, family, deviant behavior, social class and stratification, group behavior and social change.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
SYG 2000H INTRODUCTORY SOCIOLOGY - HONORS Same as SYG 2000 with honors content. Honors program permission required.	3	3	0	Sonography To register for any of the Sonography courses, you must apply and be accepted to the Diagnostic Medical Sonography program.			
SYG 2010 CONTEMPORARY AMERICAN SOCIAL PROBLEMS Analysis of major social problems confronting American society. Special emphasis on critical thinking abilities in evaluating causes, effects and various approaches in dealing with social problems. Discussion includes such topics as mental illness, crime, juvenile delinquency, race relations, pollution, population, urbanization and influences detrimental to family stability: divorce, alcoholism, gambling, drug abuse.	3	3	0	SON 1000C INTRODUCTION TO MEDICAL SONOGRAPHY Prerequisite: BSC 1010C. Prerequisites or Corequisites: BSC 2093C and HSC 1531. Corequisite: HSC 1230C. A course designed to introduce the student to the Radiology Department and to the interaction of the Diagnostic Ultrasound Department with the other imaging departments. This course will also include darkroom procedures, film processing, basic ultrasound procedures, and a hands-on lab. (Special Fee: \$44.00)	3	2	4
SYG 2320 DEVIANT BEHAVIOR Examination of sociological and social-psychological theories of deviant behavior. Considerable attention to understanding deviants' perceptions of their own behavior and view of conventional society. Major topics include heterosexual deviance, homosexual deviance, urbanizational deviance, physical deviance, suicide, mental disorder and crime.	3	3	0	SON 1001C FUNDAMENTALS OF SONOGRAPHY Prerequisite: SON 1000C. Prerequisite or Corequisite: BSC 2094C. Corequisite: SON 1804. This course will include ultrasound terminology, basic operation of the computerized ultrasound machine, routine scan planes, and review of cross sectional anatomy of the abdominal and pelvic organs. Also included are a review of the abdominal and pelvic organs and their functions and a hands-on lab. (Special Fee: \$20.00)	3	2	4
SYG 2430 MARRIAGE AND THE FAMILY Assists student in developing perspective regarding areas of adjustment in marriage and family living. Attention to premarital behavior patterns, love and mate selections, communication, family finances, sexual relations, parenthood, divorce, widowhood and remarriage.	3	3	0	SON 1112C ABDOMINAL SONOGRAPHY Prerequisites: BSC 2094C, SON 1001C and SON 1804. Corequisites: SON 1614 and SON 1814. This course is an in-depth study in the sonographic imaging of the abdominal viscera and the pathological processes that affect this area of the body. This course also includes correlation of the ultrasound findings with clinical laboratory tests and a hands-on lab.	4	3	2
SYG 2935 SELECTED TOPICS IN SOCIOLOGY Prerequisite: SYG 2000 or departmental approval. For students interested in exploring special topics in sociology through research, discussion and observation. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable		SON 1614 ACOUSTICAL PHYSICS AND INSTRUMENTATION I Prerequisite: SON 1001C. Corequisites: SON 1112C and SON 1814. A study of the properties of diagnostic ultrasound and the effective utilization of them to produce quality scans. Also covered in this class are the biologic effects of ultrasound on body tissue and routine maintenance of sonographic equipment.	3	3	0
SYG 2941 INTERNSHIP EXPLORATION IN SOCIOLOGY Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including SYG 2000 or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable		SON 1804 CLINICAL SONOGRAPHY I Prerequisite: SON 1000C. Prerequisite or Corequisite: BSC 2094C. Corequisite: SON 1001C. Supervised clinical experience and competency evaluation of professional interaction and performance of sonographic procedures with emphasis on patient care, ultrasound computer equipment orientation, cross-sectional imaging planes, and performance of quality exams. (Special Fee: \$40.00)	2	0	16

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
SON 1814 CLINICAL SONOGRAPHY II Prerequisite: SON 1804. Corequisites: SON 1112C and SON 1614. A continuation of supervised clinical experience and competency evaluation of performance of routine sonographic procedures, usage of computerized ultrasound equipment and professional interaction. Emphasis is placed critical thinking skills as related to exam performance and patient care in the clinical setting. (Special Fee: \$40.00)	2	0	16	SON 2824 CLINICAL SONOGRAPHY III Prerequisite: SON 1814. Corequisites: SON 2121, SON 2150 and SON 2618. A continuation of supervised clinical experience and competency evaluation of performance of routine sonographic procedures, computerized ultrasound machine skills and professional interaction. Emphasis is placed on critical thinking skills as related to exam performance and patient care in the clinical setting. Students will be required to research selected case studies and prepare oral presentations to be presented to the radiologist. (Special Fee: \$60.00)	3	0	24
SON 2061 SEMINAR IN SONOGRAPHY Prerequisite: SON 2122. Corequisite: SON 2880. This course is a comprehensive review of all aspects of the Sonography curriculum to prepare the students for the Board Exams. Also included is the preparation of employment resumes.	4	4	0	SON 2834 CLINICAL SONOGRAPHY IV Prerequisite: SON 2824. Corequisites: SON 2122 and SON 2619. This course is a continuation of supervised clinical experience and competency evaluation of performance of routine sonographic procedures, computerized ultrasound machine skills and professional interaction. Emphasis is placed on critical thinking skills as related to exam performance and patient care in the clinical setting. Students will be required to research selected case studies and prepare oral presentations to be presented to the radiologist. (Special Fee: \$60.00)	3	0	24
SON 2121 OB/GYN SONOGRAPHY I Prerequisite: SON 1112C. Corequisites: SON 2150, SON 2618 and SON 2824. This course includes an in-depth study of the female pelvis with emphasis on the sonographic appearance of its structure and the numerous pathological processes that may affect it. The course will continue with early pregnancy and its complications.	3	3	0	SON 2882 MEDICAL SONOGRAPHY CLINICAL PRACTICUM Prerequisite: SON 2834. Corequisite: SON 2061. This is the final course in the clinical education sequence. Students will perform routine procedures with minimal supervision. Emphasis is placed on critical thinking skills as related to exam performance and patient care in the clinical setting. Students will be required to research selected case studies and prepare oral presentations to be presented to the radiologist. (Special Fee: \$40.00)	2	0	32
SON 2122 OB/GYN SONOGRAPHY II Prerequisite: SON 2121. Corequisites: SON 2619 and SON 2834. This course is a continuation of SON 2121 which includes the sonographic evaluation of pregnancy and related complications. Emphasis is placed on the detection of fetal anomalies, pathology, and the scan planes necessary for appropriate imaging.	3	3	0	SON 2930 SELECTED TOPICS IN SONOGRAPHY Prerequisite: Departmental approval. Selected topics in sonography based on the needs and areas of interest of the class and professor. May include laboratory work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	
SON 2150 NEUROSONOLOGY AND SUPERFICIAL STRUCTURES Prerequisite: SON 1112C. Corequisites: SON 2121, SON 2618 and SON 2824. This course is a study of the sonographic imaging of the premature infant brain and the pathological processes that affect it. Also included are the sonographic evaluations of the prostate, scrotum, thyroid gland, and breast.	3	3	0	Spanish			
SON 2618 ACOUSTICAL PHYSICS AND INSTRUMENTATION II Prerequisite: SON 1614. Corequisites: SON 2121, SON 2150 and SON 2824. This course is a continuation in the study of the properties of diagnostic ultrasound and their role in the production of quality ultrasonic images of patient organs.	3	3	0	SPN 1000 BASIC SPANISH Prerequisite for SPN 1100. For students without recent high school language skills. Emphasis on everyday use of the language. Introduces basic grammar, vocabulary and composition through conversational approach to Spanish. Not recommended for native speakers.	3	3	0
SON 2619 ACOUSTICAL PHYSICS AND INSTRUMENTATION III Prerequisite: SON 2618. Corequisites: SON 2122 and SON 2834. This course is a continuation in the study of the properties of diagnostic ultrasound and their application to Doppler/color flow imaging, artifact and quality assurance. This course covers the basic mathematical principles and instrumentation of Doppler/color flow imaging, resolution and attenuation artifact, bioeffects, safety and routine maintenance of the ultrasound equipment.	2	2	0	SPN 1100 ELEMENTARY SPANISH I Prerequisite: SPN 1000 or two years of recent high school Spanish or departmental approval. Continuation of fundamental Spanish grammar.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
SPN 1101 ELEMENTARY SPANISH II Prerequisite: SPN 1100 or departmental approval. Continuation of SPN 1100.	3	3	0	SPC 1600 FUNDAMENTALS OF SPEECH Principles of oral communication common to speaking and listening. Emphasis on listening techniques, preparation, and delivery techniques for extemporaneous speaking.	3	3	0
SPN 2200 INTERMEDIATE SPANISH I Prerequisite: SPN 1101 or departmental approval. Conversational approach with readings adapted from Spanish newspapers and magazines.	3	3	0	SPC 1600H FUNDAMENTALS OF SPEECH - HONORS Same as SPC 1600 with honors content. Honors program permission required.	3	3	0
SPN 2201 INTERMEDIATE SPANISH II Prerequisite: SPN 2200 or departmental approval. Conversational approach with readings adapted from Spanish newspapers and magazines. Includes one-hour lab.	3	3	0	SPC 1601 PUBLIC SPEAKING Prerequisite: SPC 1600. Advanced principles of audience communication. Methods of presentation include impromptu, extemporaneous and manuscript. Categories include informative, entertainment, persuasion, and group discussion.	3	3	0
SPN 2201H INTERMEDIATE SPANISH II - HONORS Same as SPN 2201 with honors content. Honors program permission required.	3	3	0	SPC 1700 CROSS CULTURAL COMMUNICATION Study and application of awareness skills for communication with people of other cultures. Upon completion, student uses problem analysis skills when communicating with people of other cultures.	3	3	0
SPN 2930 SELECTED TOPICS IN SPANISH For students interested in exploring special topics in Spanish. May be repeated for credit, but grade forgiveness cannot be applied.	1-3	1-3	0	SPC 2930 SELECTED TOPICS IN SPEECH Seminar for students interested in research, discussion, and observation of special topics in speech. May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
SPN 2941 INTERNSHIP EXPLORATION IN SPANISH Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including (a foreign language course at the intermediate level) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable					
Speech				Student Development			
ORI 1000 ORAL INTERPRETATION Prerequisite: SPC 1600. Principles of selection, analysis, preparation and presentation of materials for oral reading. Experience in choral speaking and readers' theater.	3	3	0	SLS 1261 STUDENT LEADERSHIP DEVELOPMENT Dynamics of student organizational behavior with emphasis on personal and group goal setting, self affirmation, conflict resolution and development of leadership skills.	3	3	0
SPC 1016 INFORMAL COMMUNICATION Study and application of communication principles to remove verbal and non-verbal barriers. Emphasis on role playing, simulated conflicts, and dynamics of group discussion.	3	3	0	Student Success			
SPC 1050 SPEECH AND WRITING IMPROVEMENT Improvement of language skills by developing and understanding effective articulation of American English through audiolingual approach.	3	3	0	SLS 1101 COLLEGE SURVIVAL SKILLS Provides students knowledge and skills for college survival. Includes introduction to college and its resources, selected study skills and personal resource management skills. Students identify skill areas and levels they wish to improve.	1	1	0
				SLS 1122 STUDENT SUCCESS Student Success is designed to equip students for transitions in education and life. Students will be actively involved in learning and integrating practical applications to promote success. Emphasis is on investigating personality traits, learning styles and goals. Students will develop a learning portfolio and an educational plan while enhancing critical thinking and study strategies.	3	3	0

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
Surveying Technology							
SUR 1101C	4	2	2	SUR 2400	3	3	0
BASIC SURVEYING AND MEASUREMENTS (SURVEYING I)				LEGAL ASPECTS OF SURVEYING			
Prerequisite: MTB 2321 or MAC 1114 or higher mathematics or departmental approval. Elementary surveying, including fundamentals of plane surveying; use and care of equipment. Covers accurate measuring of distance; theory and practice of leveling, angles and bearings; principles and use of transit; curves; stadia; and topographic and land surveying. Coordinated class, lab and field assignments. (Special Fee: \$25.00)				Prerequisite: SUR 1101C or departmental approval. Legal principles of boundary location and professionalism; history of boundary surveys; sectional surveys; legal descriptions, property transfer, resurveys, subdivision plats; surveyor in court; water boundaries.			
SUR 1600C	3	3	0	SUR 2402	3	3	0
SURVEYING CALCULATIONS				LAND SURVEYING AND DESCRIPTIONS			
Prerequisite: MAT 0020C or MAT 0024C or departmental approval. Prepares student to solve field problems on hand-held calculator. Emphasis on economical ordering and handling of data in workplace. Analysis of data from projects important to working surveyor/business person. Includes lecture and in-class use of calculator.				Prerequisites: SUR 2610 and SUR 2400. Construction of land descriptions and techniques of surveying boundaries of described parcel of land; metes and bounds descriptions and surveys; lot and block descriptions and surveys; sectional descriptions and surveys; water boundary descriptions and surveys. (Includes all associated computations.)			
SUR 2202C	4	4	0	SUR 2460	3	3	0
HIGHWAY DRAFTING AND ROUTE DESIGN				SUBDIVISIONS			
Prerequisite: SUR 1101C or departmental approval. Highway drafting includes topographic maps, plans and profiles and cross sections. Route design covers traffic and vehicular characteristics, curvature and elevation of roadbeds, earthwork and aerial photography as they affect cost and route design. (Special Fee: \$25.00)				Prerequisite: SUR 2640. Plat construction from tract description to final record plat; plat drafting; necessary computations; lettering meaning of legal parts; current plat laws and regulations.			
SUR 2301	3	3	0	SUR 2500	3	3	0
TOPOGRAPHY AND MAPPING				ELECTRONIC AND GEODETIC SURVEYING			
Prerequisite: SUR 1101C. Study of field and drafting techniques of map construction, control surveys, detail surveys, transit-tape; transit-stadia; plane table; map drafting; contour construction; use of contour maps; cross-section field work and drafting; earthwork computations; theory and use of state plane coordinate systems; map reproduction techniques.				Prerequisite: SUR 2610. Electronic distance measurements and geodetic techniques in surveying; theory construction and use of electronic measuring devices (geodimeter, telurometer, ranger-laser); applied geodetic astronomy (bearing and latitude determination using stars, sun, elongations, etc); geodetic corrections to surveys of large extent.			
SUR 2321	2	1	2	SUR 2610	3	3	0
PROFESSIONAL DRAFTING FOR SURVEYORS				INTERMEDIATE SURVEYING COMPUTATIONS			
Techniques and drawings used in surveying profession. Includes lettering, line (pencil and ink) drafting, traverse and curve plotting, cross sections, lot surveys and boundary plats. (Special Fee: \$25.00)				Prerequisite: SUR 1101C. Field techniques and associated computations; adjustment of transit errors in angle measurements; errors in distance measurements; field techniques of traversing; traverse computations (closure and balancing); field techniques of typing points to control; tie-in computations; layout of horizontal curves; horizontal curve computations; field techniques and computations of precise levels; vertical curve computations.			
SUR 2330	2	2	0	SUR 2640	4	4	0
PHOTOGRAMMETRY				ADVANCED SURVEYING COMPUTATIONS (SURVEYING III)			
Introduction to science of aerial photo interpretation as it applies to obtaining reliable information for surveying and development of land maps. Includes parallax measurements, stereo plotting, remote sensing and radial line plotting.				Prerequisite: SUR 1101C or departmental approval. Advanced surveying office computations; traverse, horizontal curve, and vertical curve review; coordinates areas by D.M.D. and coordinates; partitioning-problems; intersection problems (line-line, line-curve, curve-curve); missing traverse parts; compound and reverse curve computations; spirals; principles of significant figures and solution analysis.			

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
--------	----	-----	-----	--------	----	-----	-----

SUR 2941 1 - 4 variable
INTERNSHIP EXPLORATION IN SURVEYING
 Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including SUR 1101C or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)

SUR 2942 1 - 4 variable
INTERNSHIP IN SURVEYING
 Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including SUR 2610 or departmental approval. This course is a planned work-based experience that will provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)

Television

RTV 1241 3 3 0
TELEVISION PRODUCTION
 Introduction to basic procedures and practices in producing. Emphasis on beginning television production techniques in studio. Includes use of cameras, lighting and staging, and application of some techniques in scriptwriting and directing.

RTV 2930 1 - 3 variable
SELECTED TOPICS IN TELEVISION TECHNOLOGY
 For students interested in research, discussion, observation, and experience in advanced techniques in television and video production. Topics selected from various areas of video technology, such as design and production of video programs, computer graphics and animation for video, editing and post-production techniques. May be repeated for credit, but grade forgiveness cannot be applied.

RTV 2941 1 - 4 variable
INTERNSHIP EXPLORATION IN RADIO AND TV
 Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including (MMC 1000 or MMC 2100) and (ENC 1101 or SPC 1600) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)

Theater

THE 1020 3 3 0
INTRODUCTION TO THEATER
 Overview of major elements involved in theater production. Includes script analysis, history, technical theater, acting and directing. Requires attendance at selected plays.

THE 1100 3 3 0
INTRODUCTION TO THEATER HISTORY
 Survey of the development of theater and drama from prehistory through the present. Representative plays studied.

THE 2300 3 3 0
SCRIPT ANALYSIS
 An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres and analyze such dramatic elements as plot, theme, character, dialogue, and style.

THE 2930 1 - 3 variable
SELECTED TOPICS IN THEATER
 For students interested in exploring special topics in theater through research, discussion and observation. May be repeated for credit, but grade forgiveness cannot be applied.

TPA 2XXX 3 2 2
ADVANCED AUDIO VISUAL TECHNOLOGY
 Prerequisite: TPA 2252. An in-depth exploration of audio visual technology and practices of the entertainment industry, the course focuses on the development of proficiency in the operation of a variety of audio visual equipment with an emphasis on systems integration. (Special Fee: \$25.00)

TPA 1210 3 2 2
BASIC STAGECRAFT I
 Methods of scenery construction. Covers tools, materials, hardware and basic approaches to building scenery using hands-on experience to complement lectures. (Special Fee: \$25.00)

TPA 1211 3 2 2
BASIC STAGECRAFT II
 Special emphasis on construction of props, scene painting techniques, special effects and installation. (Special Fee: \$25.00)

TPA 1230 3 2 2
COSTUME TECHNIQUES AND WARDROBE PRACTICES
 Emphasis on planning, execution and running of costumes for production. (Special Fee: \$25.00)

TPA 1248 3 2 2
MAKEUP FOR THE STAGE
 Study of principles, materials and applications of theatrical makeup.

TPA 2000 3 3 0
BASIC THEATER DESIGN
 Involves students in preliminary concepts of stage, lighting, and custom design. Teaches student history of theatrical presentation and motivation for design concepts.

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
TPA 2220 INTRODUCTION TO STAGE LIGHTING Stage lighting techniques, practices and equipment. Includes electrical theory, use of dimming systems and implementation of lighting designs. (Special Fee: \$25.00)	4	3	2	TPA 2941 INTERNSHIP EXPLORATION IN THEATER Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including TPA 2290 and (TPA 1210 or TPA 2220 or TPA 2260 or THE 1020) or departmental approval. This course is a planned work-based experience that provides students with supervised career exploration activities and/or practical experiences related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
TPA 2221 ADVANCED STAGE LIGHTING Prerequisite: TPA 2220. A hands-on exploration of specialized lighting equipment and techniques used in live entertainment. Emphasizes lighting in non theatrical spaces, computerized lighting control, and intelligent lighting fixtures. (Special Fee: \$25.00)	4	3	2	TPA 2942 INTERNSHIP IN THEATER Prerequisites: Satisfactory completion of required college-preparatory courses; 12 Valencia college-level credits including a total of 4 courses with TPA or MUM prefixes to include TPA 2290 or TPA 2257 or departmental approval. This course is a planned work-based experience that provides students with an opportunity to enhance workplace skills through a supervised practical experience related to their career objectives. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: \$65.00)	1 - 4	variable	
TPA 2250 AUTOCAD FOR THE ENTERTAINMENT INDUSTRY An introduction to AUTOCAD with emphasis on creating standard working drawings used in the entertainment industry. (Special Fee: \$25.00)	3	3	0	TPP 1110 ACTING I Introduction to practical skills necessary to art of acting. Includes character analysis and development; script and analysis; learning techniques for performance preparation, including relaxation, physical and vocal warm ups; study of acting methods and styles; rehearsal behavior, performance of monologues and scenes.	3	1	2
TPA 2252 INTRODUCTION TO AUDIO VISUAL TECHNOLOGY An introduction to the audio visual technology and practices of the entertainment industry. The course will focus on the set-up, operation and troubleshooting of basic audio visual equipment including video and slide projectors, monitors, computers and projection screens. (Special Fee: \$25.00)	3	2	2	TPP 1111 ACTING II Prerequisite: TPP 1110. Further application of principles studied in Acting I. Includes selection, rehearsal and performance of repertoire of monologues, preparing resume, auditioning techniques, and public performance in one-act plays. Focus on acting as career.	3	1	2
TPA 2257 AUDIO VISUAL PRODUCTION Prerequisite: TPA 2252. Participation by student as audio visual technician for theater, dance, film or music events. (Special Fee: \$25.00)	3	0	3	TPP 2190 REHEARSAL AND PERFORMANCE I Prerequisite: By audition only. Participation in a major theater production as a member of the cast. (Lab involves 5-20 hours per week of rehearsals and/or performances.) May be repeated for credit, but grade forgiveness cannot be applied.	1 - 3	variable	
TPA 2260 INTRODUCTION TO AUDIO PRODUCTION This course introduces students to the theory and practices of sound reinforcement and recording for the entertainment industry. It covers audio equipment, sound systems, recording techniques and sound reinforcement for live events with a hands-on, project-focused approach. (Special Fee: \$25.00)	4	3	2	TPP 2300 DIRECTING I Acquaints student of theater with overall function of director of play. Includes study of history and theory of directing, as well as practical experience in selecting and casting play, planning rehearsals, blocking, analyzing script, working with actors. Also includes overseeing scenery, lighting, costumes, properties, and stage management. Students direct one-act play for public performance.	3	1	2
TPA 2282 THEATER EQUIPMENT MAINTENANCE Provides students with a systematic approach to maintenance and trouble-shooting of theater sound and lighting equipment. (Special Fee: \$25.00)	2	0	4	TPP 2500 STAGE MOVEMENT FOR THE ACTOR Focuses on developing the physical aspects of actor training with emphasis on exercises relating to physical warm-ups, body language, flexibility, control, and character development.	2	1	2
TPA 2290 TECHNICAL THEATER PRODUCTION Participation by student as technician in dramatic productions at the College. May be repeated for up to 12 hours credit, but grade forgiveness cannot be applied.	1 - 3	variable					
TPA 2930 SELECTED TOPICS IN THEATER TECHNOLOGY Selected topics in theater technology based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable					

Course	Cr	Cls	Lab	Course	Cr	Cls	Lab
TPP 2710 VOICE FOR THE ACTOR A study of the principles of standard speech for the actor. Exercises in diction and articulation, voice production and placement, vowel and consonant formation, projection, breathing, and relaxation. This course is useful for anyone wishing to improve his/her speaking	2	1	2	TPP 2930 SELECTED TOPICS IN THEATER PERFORMANCE Selected topics in theater performance based on the needs and areas of interest of the class and professor. May include laboratory and/or field work as part of the class. Can be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.	1 - 3	variable	

