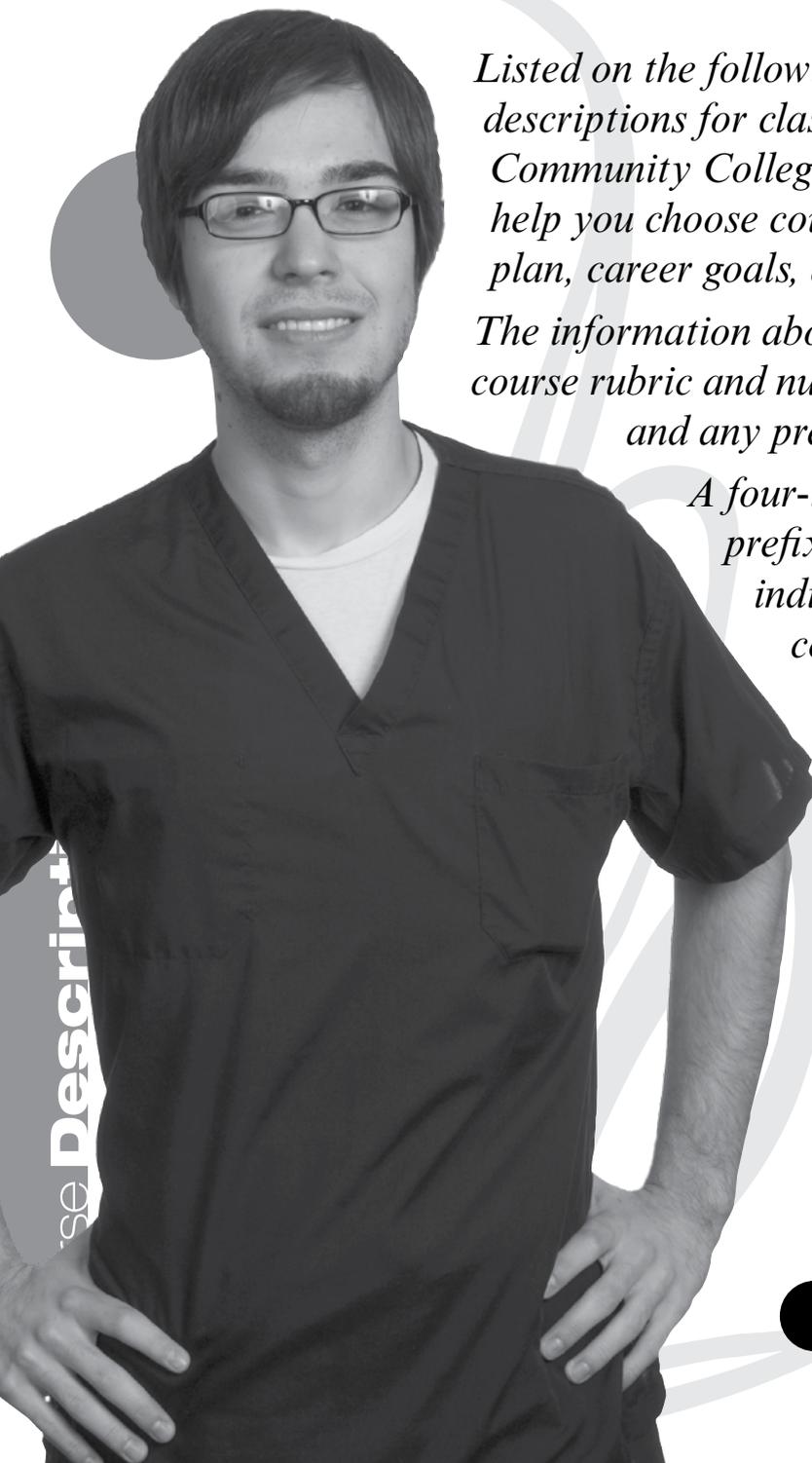


Course **Descriptions**

San Jacinto Community **College** District



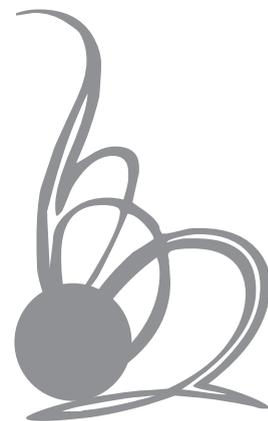
Course Descriptions



Listed on the following pages are the course descriptions for classes available at San Jacinto Community College District. The descriptions will help you choose courses which best fit your degree plan, career goals, and/or transfer requirements.

The information about each course includes the course rubric and number, title, a brief description and any prerequisites.

A four-letter rubric, or alphabetic prefix, precedes each course title to indicate the subject area of the course or department through which the course is offered. An Index to Disciplines and an Index of Course Rubrics are located on the front part of this section along with helpful definitions.



Index to Subjects

Accounting (ACCT, ACNT)	DFTG)	Non-Destructive Testing Technology (METL, NDTE, QCTC, WLDG)
Aeronautical Technology (AIRP, AVIM)	English (ENGL)	Nursing (RNSG)
Air Conditioning Technology (HART)	English for Speakers of Other Languages (ESOL)	Nursing Home Administration (LTCA)
Anthropology (ANTH)	Environmental Science (ENVR)	Occupational Health and Safety Technology (EPCT, OSHT)
Applied Computer Electronics Technology (CETT, CPMT, CSIR, EECT, ELMT)	Fire Protection Technology (FIRS, FIRT)	Paralegal (LGLA)
Art (ARTS) and Visual Communication (ARTC, ARTS, ARTV, GRPH, IMED, ITSW)	Foreign Languages (CHIN, FREN, GERM, SPAN)	Pharmacy Technician (PHRA)
Astronomy (PHYS)	Geographic Information Services (CRTG)	Philosophy (PHIL)
Audio Engineering-(MUSB, MUSC)	Geography (GEOG)	Physical Education/Health Education (PHED)
Automotive Collision Repair Technology (ABDR)	Geology (GEOL)	Physical Therapist Assistant (PTHA)
Automotive Technology (AUMT)	Gerontology Services (GERS)	Physics (PHYS)
Biology (BIOL)	Government (GOVT)	Pipefitting (PFPB)
Biotechnology (BITC)	Health Information Management (HITT, HPRS)	Plumbing (PFPB)
Business (BCIS, BUSG, BUSI)	History (HIST)	Process Technology (CTEC, PTAC, PTRT, SCIT)
Business Management (BMGT, HRPO, MRKG)	Humanities (HUMA)	Psychology (PSYC)
Business Office Technology (POFI, POFL, POFM, POFT)	Information Technology (EDTC, GAME, IMED, INEW, ITCC, ITMC, ITMT, ITNW, ITSC, ITSE, ITSW, ITSY)	Public Service Administration (PBAD)
Chemistry (CHEM)	Inspection Technology (See Non-Destructive Testing Technology)	Reading (READ)
Child Development/Early Childhood Education (CDEC, FMLD, TECA)	Instrumentation Technology (INTC)	Real Estate (RELE)
Communications (COMM)	Interior Design (INDS)	Respiratory Care (RSPT)
Computer Science (COSC)	International Business and Trade (IBUS)	Restaurant Management (See Culinary Arts)
Cosmetology (CSME)	Journalism (See Communications)	Sheet Metal (MCHN)
Criminal Justice (CJCR, CJLE, CJSA, CRIJ)	Management Development (See Business Management)	Sociology (SOCL)
Culinary Arts (CHEF, IFWA, PSTR, RSTO)	Mathematics (MATH)	Speech (SPCH)
Dance (DANC)	Medical Assisting (MDCA)	Study Skills (See Developmental Studies)
Developmental Studies (DEVS)	Medical Imaging Technology (CTMT, MRIT, RADR)	Surgical Technology (HPRS, SRGT)
Diesel Technology (DEMTR)	Medical Laboratory Technology (HPRS, MLAB, PLAB, SCIT)	Truck Driving (Commercial) (CVOP)
Dietetics (DITA, FDNS, HECO, IFWA)	Mental Health Services (CMSW, DAAC, SCWK, SOCW, PMHS, PSYT)	Vision Care Technology (HPRS, OPTS)
Drama (DRAM)	Military Science (AFSC, MSCI)	Visual Communication (See Art and Visual Communication)
Economics (ECON)	Music (MUSI, MUAP, MUEN)	Vocational Nursing (VNSG)
Education (EDUC)		Welding Technology (WLDG)
Electrical Technology (ELPT, IEIR)		
Emergency Medical Technology (EMSP)		
Engineering (ENGR)		
Engineering Design Graphics (ARCE, ARTV,		

An alphabetic prefix called a rubric, usually containing four characters, is used to designate the subject area of the course or department through which the course is offered.

Each course is given a four-character numeric code, called the course number. The first digit denotes the academic level or year in which college-level courses are usually taken. The number "1" indicates freshman or first-year courses; the number "2" indicates sophomore or second-year courses. When the first number is "0," the course is College Preparatory level. The second digit represents the semester credit hour (SCH) value of the course. The third and fourth digits are for departmental sequencing and make the course number unique within the subject area of the department. Consecutive numbers are not always used; however, in general, higher numbers are used for the more advanced courses while lower numbers are used for less advanced courses.

Numbers in parentheses at the end of each course description indicate the following: first digit, semester credit hours; second digit, lecture hours per week; third digit, laboratory hours per week. A capital letter "A," indicates Tech-Prep articulation.

Course **Descriptions**

Index of Course Rubrics

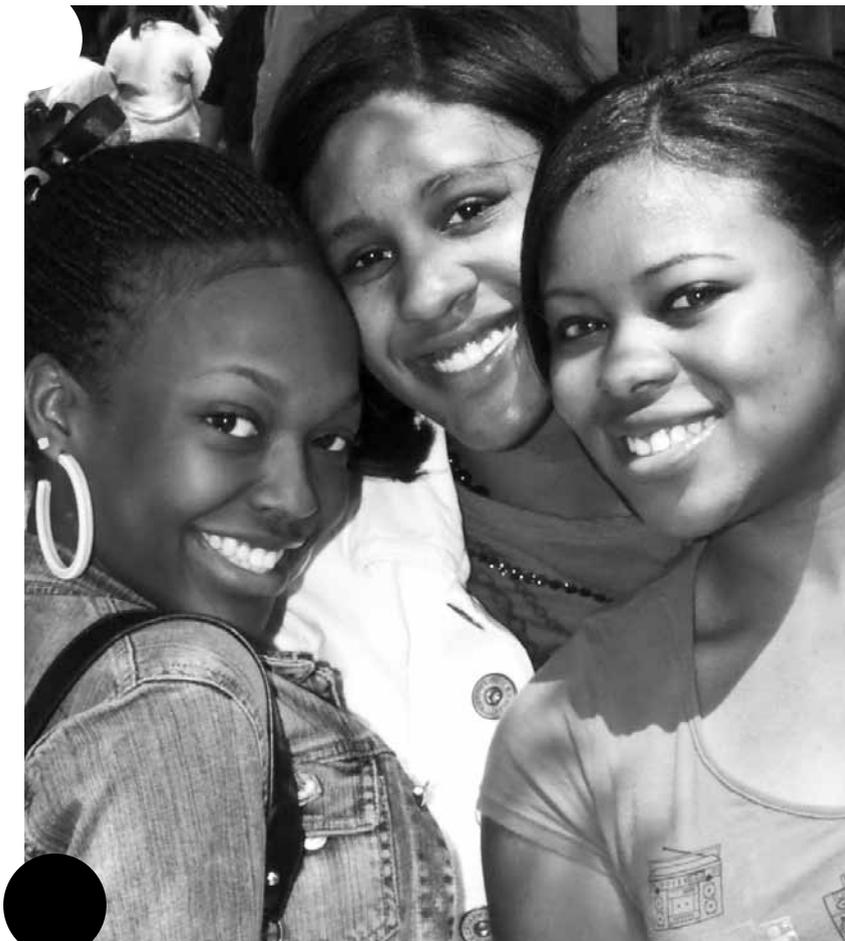
Abbr	Program	Abbr	Program	Abbr	Program
ABDR	Automotive Collision Repair Technology	CSME	Cosmetology	GRPH	Visual Communication
ACCT	Accounting	CTEC	Process Technology	HART	Air Conditioning Technology
ACNT	Accounting	CTMT	Medical Imaging Technology	HECO	Dietetics
AFSC	Military Science	CULA	Culinary Arts	HIST	History
AIRP	Aeronautical Technology (Aircraft Pilot)	CVOP	Truck Driving (Commercial)	HITT	Health Information Technology Technician
ANTH	Anthropology	DAAC	Mental Health Services	HRPO	Business Management
ARCE	Engineering Design Graphics	DANC	Dance	HPRS	Health Information Management
ARTC	Visual Communication	DEMUR	Diesel Technology	HPRS	Health Professions and Related Sciences
ARTC	Engineering Design Graphics	DEVS	Developmental Studies	HPRS	Medical Laboratory Technology
ARTS	Art	DFTG	Engineering Design Graphics	HPRS	Surgical Technology
ARTV	Engineering Design Graphics	DITA	Dietetics	HPRS	Vision Care
ARTV	Visual Communication	DRAM	Drama	HUMA	Humanities
AUMT	Automotive Technology	ECON	Economics	IBUS	International Business and Trade
AVIM	Aeronautical Technology (Aviation Management)	EDTC	Information Technology	IEIR	Electrical Technology
BCIS	Business	EDUC	Education	IFWA	Culinary Arts
BIOL	Biology	EECT	Applied Computer Electronics Technology	IFWA	Dietetics
BITC	Biotechnology	EECT	Electrical Technology	IMED	Information Technology
BMGT	Business Management	ELMT	Applied Computer Electronics Technology	IMED	Visual Communication
BUSG	Business	ELPT	Electrical Technology	INDS	Interior Design
BUSI	Business	ELPT	Instrumentation Technology	INEW	Information Technology
BUSI	Business Management	EMSP	Emergency Medical Technology	INTC	Instrumentation Technology
CDEC	Child Development/Early Childhood Education	ENGL	English	ITCC	Information Technology
CETT	Applied Computer Electronics Technology	ENGR	Engineering	ITMC	Information Technology
CHEF	Culinary Arts	EPCT	Environmental Technology	ITNW	Information Technology
CHEM	Chemistry	EPCT	Occupational Health and Safety Technology	ITSC	Information Technology
CHIN	Chinese	ESOL	English for Speakers of Other Languages	ITSE	Information Technology
CJCR	Criminal Justice	FDNS	Dietetics	ITSW	Visual Communication
CJLE	Criminal Justice Law Enforcement	FIRS	Fire Protection Technology	ITSW	Information Technology
CJSA	Criminal Justice	FIRT	Fire Protection Technology	ITSY	Information Technology
CMSW	Mental Health Services	FMLD	Child Development/Early Childhood Education	LGLA	Paralegal
COMM	Communications/ Journalism	FREN	French	LTCA	Nursing Home Administration
COSC	Computer Science	GAME	Information Technology	MATH	Mathematics
CPMT	Applied Computer Electronics Technology	GEOG	Geography	MDCA	Medical Assisting
CRIJ	Criminal Justice	GEOL	Geology	MCHN	Sheet Metal
CRTG	Geographic Information Science	GERM	German	METL	Non-Destructive Testing Technology
CSIR	Applied Computer Electronics Technology	GERS	Gerontology Services	MLAB	Medical Laboratory Technology
		GOVT	Government	MRIT	Medical Imaging Technology
				MRKG	Business Management
				MRMT	Business Office Technology
				MSCI	Military Science

Course Descriptions

Abbr	Program
MSSG	Massage Therapy
MUAP	Applied Music
MUSB	Audio Engineering
MUSC	Audio Engineering
MUSI	Music
MUEN	Musical Organizations
NDTE	Non-Destructive Testing Technology
OPTS	Optical Science/Vision Care
OSHT	Occupational Health and Safety Technology
PBAD	Public Service Administration
PFPB	Pipefitting
PFPB	Plumbing
PHED	Physical Education/Health Education
PHIL	Philosophy
PHRA	Pharmacy Technician
PHYS	Physics

Abbr	Program
PLAB	Medical Laboratory Technology
PMHS	Mental Health Services
POFI	Professional Office Information
POFL	Professional Office Legal
POFM	Professional Office Medical
POFT	Professional Office Technology
PSTR	Culinary Arts/ Restaurant Management
PSYC	Psychology
PSYT	Mental Health Services
PTAC	Process Technology
PTHA	Physical Therapist Assistant
Ptrt	Process Technology
QCTC	Non-Destructive Testing Technology
QCTC	Welding Technology
RADR	Medical Imaging Technology
READ	Reading
RELE	Real Estate

Abbr	Program
RNSG	Nursing (RN)
RSPT	Respiratory Care
RSTO	Culinary Arts
SCIT	Medical Laboratory Technology
SCIT	Process Technology
SCWK	Mental Health Services
SOCI	Sociology
SOCW	Mental Health Services
SPAN	Spanish
SPCH	Speech
SRGT	Surgical Technology
TECA	Child Development/Early Childhood Education
VNSG	Surgical Technology
VNSG	Vocational Nursing
WLDG	Welding Technology
WLDG	Non-Destructive Testing Technology



DEFINITIONS:

Course Number: A four letter rubric (subject) and four digit number: SUBJ 1234. First digit "0" indicates College Preparatory, "1" indicates freshman level; "2" indicates sophomore level. Second digit indicates number of semester hours of credit. Third and fourth digits uniquely identify the course.

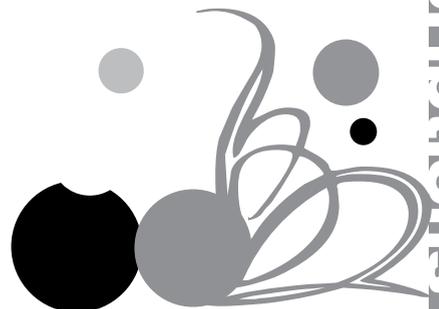
Course Title: Descriptive Title for Transcript Classification Code (in parenthesis): Federal CIP Code, 6 digits indicate a Workforce Education course and 10 digits indicate an Academic Transferable course.

Description: A short description of the course content.

Former Course Designation, if any: Previous course number(s) used at San Jacinto Community College District for this course.

Course Prerequisites: Courses or basic skill levels as defined by Texas Success Initiative required before enrollment.

(SCH:LEC-LAB): SCH = Semester credit hours of the course; LEC = Lecture contact hours per week for a 16-week course; LAB = Lab contact hours in a 16-week course.



Course Descriptions

Accounting

ACCT 2301 Accounting Principles I (5203015104)

(Formerly Accounting 2311)

This study of the fundamentals of financial accounting includes accounting procedures, concepts and theory for proprietorships, partnerships, and corporations. The class emphasizes the accounting cycle for service and merchandising enterprises. Prerequisite: Reading level 7. (3:3-1.5)

ACCT 2302 Accounting Principles II (5203015104)

(Formerly Accounting 2312)

This study of the fundamentals of managerial accounting emphasizes accounting for a manufacturing concern. Topics include budgeting, planning, and management decision-making. Prerequisite: ACCT 2301. (3:3-1.5)

ACNT 1303 Introduction to Accounting I (520302)

(Formerly Elementary Accounting 131, ACCT 1301, ACCT 1371)

This course focuses on analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliation, and payroll. (ACNT 1303 may not count for degree or certificate purposes if the student receives credit for ACCT 2301.) ACNT 1303 and 1304 will not satisfy the business administration transfer program degree accounting requirements. (3:3-0)

ACNT 1304 Introduction to Accounting II (520302)

(Formerly Elementary Accounting 132, ACCT 1302, ACCT 1372)

This course focuses on accounting for merchandising, notes payable, notes receivable, valuation of receivables and equipment, and valuation of inventories in a manual and computerized environment. Prerequisite: ACNT 1303. (ACNT 1304 may not count for degree or certificate purposes if the student receives credit for ACCT 2301.) ACNT 1303 and 1304 will not satisfy the business administration transfer program degree accounting requirements. (3:3-0)

ACNT 1311 Introduction to Computerized Accounting (520302)

(Formerly ACCT 2319, ACCT 2379)

This course provides an introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications, with primary emphasis on a general ledger package and spreadsheet applications. Typical areas covered include the general ledger, accounts payable, accounts receivable, and payroll. Prerequisite: ACCT 2301 or ACNT 1303 and 1304 or instructor approval. (3:3-0)

ACNT 1329 Payroll and Business Tax Accounting (520301)

(Formerly ACCT 2320, ACCT 2377)

This is a study of payroll procedures, taxing entities, and reporting requirements of local, state and federal taxing authorities in a manual and computerized environment. Prerequisite: Reading level 4. (3:3-0)

ACNT 1331 Federal Income Tax: Individual (521601)

(Formerly ACCT 2318, ACCT 2378)

This course provides basic instruction in the tax laws as currently implemented by the Internal Revenue Service and in tax preparation for the individual and sole proprietorship. Prerequisite: Reading level 4. (3:3-0)

ACNT 2303 Intermediate Accounting I (520301)

(Formerly Accounting 233, ACCT 2313, ACCT 2373)

The focus of this course is critical analysis of generally accepted accounting principles, concepts, and theory underlying the preparation of financial statements. Emphasis on current theory and practice. Prerequisite: ACCT 2301. (3:3-0)

ACNT 2304 Intermediate Accounting II (520301)

(Formerly Accounting 234, ACCT 2314, ACCT 2374)

The focus of this course is in-depth analysis of generally accepted accounting principles underlying the preparation of financial statements, including comparative analysis and statement of cash flow. Prerequisite: ACCT 2301. (3:3-0)

ACNT 2309 Cost Accounting (520301)

(Formerly ACCT 2316, ACCT 2376)

This course focuses on budgeting and cost control systems, including a detailed study of manufacturing cost accounts and reports, job order costing, and process costing. It includes an introduction to alternative costing methods such as activity-based and just-in-time costing. Prerequisite: ACCT 2302 or equivalent. (3:3-0)

ACNT 2366 Practicum-Accounting (520301)

(Formerly ACCT 2375)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. The course may be repeated if topics and learning outcomes vary, but no more than three times for credit. Prerequisite: ACCT 2301 and 2302 or approval of department chair. (3:0-21)

Aeronautical Technology

AIRP 1215 Private Flight (Private Pilot) (490102)

(Formerly AVIA 1381, Flight 131, AVIA 1281, AVIA 1181)

This is flight training to prepare the student for the completion of the Federal Aviation Administration (FAA) private pilot certificate, including dual and solo flight, in which students practice specific maneuvers and cross-country navigation. Prerequisite: Reading level 6. Prerequisite: or co-requisite: Federal Aviation Regulation Part 141 Ground School Training and aeronautical department chair approval. (AIRP 1301, AIRP 1307, and AIRP 1311). (2:1-3)

AIRP 1255 Intermediate Flight (Commercial Pilot) (490102)

(Formerly AVIA 1382, Flight 232, AVIA 1282)

This course provides students with flight hours and skills necessary to meet solo cross-country requirements for the FAA commercial pilot, single-engine land, airplane certificate. Prerequisite: AIRP 1215 or a valid Private Pilot Certificate. Reading level 6. Prerequisite: or co-requisite: AIRP 2250 and aviation department chair approval. This course may be taken twice for credit. (2:1-2)

Course Descriptions

AIRP 1301 Air Navigation (490102)

(Formerly Aeronautical Technology 130, AVIA 1310, AVIA 1410)

Students receive instruction in visual flight rules navigation in the National Airspace System. Topics include sectional charts, flight computers, plotters, and navigation logs and publications. It qualifies as part of a program leading to Federal Aviation Administration certification. One of three Private Pilot Ground School courses. (3:3-0)

AIRP 1307 Aviation Meteorology (490102)

(Formerly Aeronautical Technology 134, AVIA 1314)

This course provides in-depth coverage of meteorological phenomena affecting aircraft flight. Topics include basic concepts of aviation meteorology in the study of temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing, and fog. It also includes analysis and use of weather data for flight planning. It qualifies as part of a program leading to FAA certification and is one of three private pilot ground school courses. (3:3-0)

AIRP 1311 Flight Theory (490102)

(Formerly Aeronautical Technology 136, AVIA 1316)

This course provides instruction in basic flight information needed for flight in the National Aerospace System. Topics include publications, regulations, aircraft systems, and performance. It qualifies as part of a program leading to FAA certification and is one of three private pilot ground school courses. (3:3-0)

AIRP 1341 Advanced Air Navigation (490102)

(Formerly AVIA 1320)

This course helps students develop advanced airplane systems and performance skills, including radio navigation and cross-country flight planning. Includes an introduction to instrument flight operations and navigation. The course may be used as part of a program leading to FAA certification. Prerequisite: AIRP 1301, or a Private Pilot Certificate. (3:3-0).

AIRP 1343 Aerodynamics (490102)

(Formerly Aeronautical Technology 236, AVIA 2316)

This is a study of the general principles of the physical laws of flight. Topics include physical terms and the four forces of flight: lift, weight, thrust, and drag. Aircraft design, stability control, and high-speed flight characteristics are also included. Prerequisite: Math level 7. (3:3-0)

AIRP 1345 Aviation Safety (490102)

(Formerly AVIA 2317)

This survey of the fundamentals essential to the safety of flight focuses on decision-making factors, accident reporting, accident investigation, air traffic systems, and aircraft technologies. (3:3-0)

AIRP 1347 Human Factors in Aviation (490102)

(Formerly Aeronautical Technology 137, AVIA 1317)

This course provides instruction in flight physiology, the decision-making process, pilot health maintenance, psychological aspects of flight, human behavior as related to the aircraft flight deck, and aeronautical information of significance to flight crews. (3:3-0)

AIRP 1451 Instrument Ground School (490102)

(Formerly AVIA 2314, AIRP 1351)

This is a study of basic instrument radio and navigation fundamentals used in instrument flight. Topics include a description and practical use of navigation systems and instruments, charts used for instrument flight, and FAA regulations. It qualifies as part of a program leading to FAA certification. Prerequisites: AIRP 1301, AIRP 1307, and AIRP 1311, or Private Pilot Certificate and aeronautical department chair approval. Prerequisite: or co-requisite: AIRP 1341. (4:4-0)

AIRP 2239 Commercial Flight (Commercial Pilot) (490102)

(Formerly AVIA 2383, Flight 233, AVIA 2183)

The flight instruction in this course is necessary to qualify for the FAA Commercial Pilot Certificate. Instruction includes both dual and solo flight training to prepare the student for mastery of all commercial pilot maneuvers. Prerequisites: AIRP 1215, AIRP 1255, and AIRP 2250; or Private Pilot Certificate and Instrument Pilot Rating and aeronautical department chair approval. Reading level 6. Prerequisite: or co-requisite: FAR Part 141 ground school training. (AIRP 2337). (2:1-3)

AIRP 2242 Flight Instructor-Instrument Airplane (490108)

(Formerly AVIA 2385, Flight 322, AVIA 2185)

This course helps flight instructors develop the skills necessary to qualify for the FAA Certified Flight Instructor Instrument Rating, airplane single-engine landing. Prerequisites: Flight Instructor and Instrument Pilot Certificates and aeronautical department chair approval. Reading level 6. (2:2-0)

AIRP 2243 Flight Instructor-Multiengine Airplane (490108)

(Formerly AVIA 2288)

The flight instruction in this course is necessary to qualify for the FAA Flight Instructor-Multiengine Airplane Rating. It includes combined ground and flight instruction and analysis of flight maneuvers. Prerequisites: Private, Commercial, Instrument, Multi-Engine and Flight Instructor Certificates and aeronautical department approval. Reading level 6. (2:1-2)

AIRP 2250 Instrument Flight (490102)

(Formerly AVIA 2384, Flight 234, AVIA 2184)

This course prepares students for completion of the FAA Instrument Pilot Rating with mastery of all instrument flight procedures. Prerequisite: AIRP 1215 or a valid Private Pilot Certificate and Aeronautical department chair approval. Reading level 6. Prerequisite: or co-requisite: FAR Part 141 ground school training (AIRP 1451)(2:1-3)

AIRP 2251 Multiengine Flight (490102)

(Formerly Multi-Engine Flight II, AVIA 2187)

This course is preparation for the multi-engine class rating, which will be added to a current pilot certificate. It includes explanation and demonstration of all required FAA normal and emergency operations and procedures. Prerequisite: AIRP 1215, AIRP 1255, AIRP 2239, and AIRP 2250 or Private or Commercial Pilot Certificate and Instrument Pilot Rating and aeronautical department chair approval. Reading level 6 (2:2-0)

AIRP 2331 Advanced Meteorology (490102)

(Formerly AVIA 2315)

This course prepares advanced aviation students to apply knowledge of varying meteorological factors (including weather hazards) to flight. It teaches techniques for minimizing weather hazards and for using aviation weather services. Prerequisite: AIRP 1307 (3:3-0)

AIRP 2333 Aircraft Systems (490102)

(Formerly AVIA 2324)

This is a study of the general principles, operation, and application of pneumatic, hydraulic, electrical, fuel, environmental, protection, and warning systems. Emphasis on types of aircraft structures and their control systems. (3:3-0)

Course Descriptions

AIRP 2336 Certified Flight Instructor-Airplane (490108)

(Formerly Flight 341, AVIA 2386)

This flight instruction is necessary to qualify for the FAA Certified Flight Instructor-Airplane Certificate. Topics include ground and flight instruction. Prerequisite: Commercial Pilot Certificate and Instrument Pilot Rating and aeronautical department chair approval. Reading level 6. (3:2-3)

AIRP 2337 Commercial Ground School (490102)

(Formerly Aeronautical Technology 232, AVIA 2312)

This is a study of advanced aviation topics that can be used for Federal Aviation Administration certification at the commercial pilot level. It includes preparation for the FAA Commercial Airplane written test. Prerequisites: AIRP 1301, AIRP 1307, and AIRP 1311; or a Private Pilot Certificate (3:3-0)

AIRP 2352 Practical Dispatching I (490102)

(Formerly Flight Engineer Preparation, AVIA 2325)

This is a study of advanced concepts in weight and balance; performance calculations, avionics; and engine and airplane specifications, including Federal Aviation regulations. Preparation for the FAA Aircraft Dispatcher written examination. (3:3-0)

AIRP 2353 Practical Dispatching II (490102)

(Formerly AVIA 2326)

This is a study of the duties and responsibilities required of an aircraft dispatcher. Topics include instruction in FAA regulations; flight planning; and company operations, both domestic and international. Preparation for the FAA Practical Examination. Students must be at least 21 years old to take the FAA Aircraft Dispatcher exam. Prerequisite: or co-requisite: AIRP 2352. (3:3-1)

AIRP 2355 Propulsion Systems (490102)

(Formerly Aeronautical Technology 233, AVIA 2313)

This course provides in-depth coverage of aircraft engine theory and principles of operation of various types of aircraft engines, including reciprocating, turboprop, turbojet, and turbo fan. Topics include propellers, superchargers, engine accessories, controls and instrumentation. (3:3-0)

AIRP 2357 Turbine Aircraft Systems Ground School (490102)

(Formerly AVIA 2327)

This course provides instruction in the systems of specific turbine aircraft. Emphasis on the "glass-cockpit," auxiliary power, aircraft systems, and the first officer's operational role. Prerequisite: AIRP 2355. (3:3-0)

AVIM 1301 Introduction to Aviation Management (490104)

(Formerly Aviation 233, AVIA 2323)

An introduction to small aviation business management, this course emphasizes financial marketing, human resources, and administrative and information systems essential for successful business operations. (3:3-0)

AVIM 2331 Airline Management (490104)

(Formerly Aviation 232, AVIA 2321)

This is an examination of the organization, operation, and management of airlines. Topics include financing, aircraft selection, route feasibility studies, load factors, and marketing. (3:3-0)

AVIM 2335 Airport Management (490104)

This is a study of the major functions of airport management, including facilities and services, organization, human resources, maintenance, planning and zoning, operations, revenues and expenses, public relations, ecology, and safety. (3:3-0)

AVIM 2337 Aviation Law (490104)

(Formerly Aviation 230, AVIA 2310)

This is a study of the historical development of aviation law, including in-depth coverage of constitutional, criminal, civil, common, and international law as it relates to aviation activities. (3:3-0)

AVIM 2339 Aviation Marketing (490104)

This is a study of the significance and functions of airline marketing, including market research, sales, advertising and promotion, traffic demand analysis, and price determination theory. (3:3-0)

Air Conditioning Technology

HART 1401 Basic Electricity for HVAC

This course focuses on principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation. (4:3-3)

HART 1407 Refrigeration Principles (150501)

(Formerly AIRC 1401)

This is an introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigeration handling, refrigeration compounds, and safety. (4:3-3)

HART 1441 Residential Air Conditioning (150501)

(Formerly AIRC 1412)

This is a study of components, applications, and installation of mechanical air conditioning systems. Topics include operating conditions, troubleshooting, repair, and charging of air conditioning systems. Prerequisite: HART 1401 and HART 1407 or department chair approval. (4:3-3)

HART 1445 Gas Electrical Heating (150501)

(Formerly AIRC 1413)

This is a study of the procedures and principles used in servicing heating systems, including gas fired furnaces and electric heating systems. Prerequisite: or co-requisite: HART 1401 and HART 1407 or department chair approval. (4:3-3)

HART 2301 Air Conditioning and Refrigeration Codes (150501)

(Formerly AIRC 2310, HART 1371)

This course focuses on HVAC standards and concepts, with emphasis on understanding and documenting the codes and regulations required for a state mechanical contractors license and complying with local codes. Prerequisites: HART 1441 or department chair approval. (3:3-0)

HART 2302 Commercial Air Conditioning System Design (150501)

This is an advanced study in essential elements of commercial air conditioning contracting, including duct systems design and/or material takeoff, weight estimating, equipment selection, using manufacturers' catalog data, job cost estimating, scheduling preparation of shop drawings, and submittals. Prerequisites: HART 2345 and HART 2441 or department chair approval. (3:3-0)

HART 2334 Advanced A/C Controls (150501)

(Formerly AIRC 2413, HART 2434)

This course focuses on the theory and use of electrical control devices, electromechanical controls, and/or pneumatic controls. Prerequisites: HART 2431 and HART 2441 or department chair approval. (3:3-0)

HART 2343 Industrial Air Conditioning (150501)

This is a study of components, accessories, applications, and installation of air conditioning systems above 25 ton capacity. Prerequisites: HART 2441 and HART 2431 or department chair approval. (3:3-0)

HART 2345 Residential A/C System Design (150501)

(Formerly AIRC 1301; HART 2545)

Students study the properties of air and results of cooling, heating, humidifying or dehumidifying. They also learn to make heat gain and heat loss calculations necessary for equipment selection and balancing air systems. Prerequisites: HART 1441 and HART 1445 or department chair approval. (3:3-0)

HART 2368 Practicum-Heating, A/C and Refrigeration Technology/Technicians (150501)

(Formerly AIRC 2340)

This course offers practical general workplace training through individualized learning plans developed by the employer, the College, and student. Prerequisites: completion of 20 semester hours of air conditioning courses, an interview, and department chair approval are required prior to internship assignment. (3:0-21)

HART 2431 Advanced Electricity (150501)

This course provides advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment, including detailed instruction in motors and power distribution motors, motor controls, and applications of solid state devices. Prerequisite: HART 1441 and HART 1445 or department chair approval. (4:3-3)

HART 2436 Air Conditioning Troubleshooting (150501)

This is an advanced course in the application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration component and system problems, including conducting performance tests. Prerequisites: HART 1441 and HART 1445 or department chair approval. (4:3-3)

HART 2441 Commercial Air Conditioning (150501)

(Formerly AIRC 2401)

This is a study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less. Prerequisite: or co-requisite: HART 1441 and HART 2431 or department chair approval. (4:3-3)

HART 2442 Commercial Refrigeration (150501)

(Formerly AIRC 1414, HART 1442)

This course focuses on both the theory and practice in the maintenance of commercial refrigeration, both medium and low temperature applications, and ice machines. Prerequisites or co-requisites: HART 1401 and HART 1407 or department chair approval. (4:3-3)

HART 2449 Heat Pumps (150501)

(Formerly AIRC 2414, HART 1449)

This is a study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems. Prerequisites: HART 1401 and HART 1407 or department chair approval. (4:3-3)

Air Conditioning (HVAC) Certificate

Non-Credit Continuing Education Course

HART 1007 Refrigeration Principles

(Continuing Education Course)

This is an introduction to the refrigeration cycle, basic thermodynamics, heat transfer, temperature/pressure relationship, safety, refrigeration containment, and refrigeration components.

HART 1041 Residential Air Conditioning

(Continuing Education Course)

This is a study of components, applications, and installation of mechanical air conditioning systems, including operating conditions, troubleshooting, repair, and charging of air conditioning systems.

HART 1045 Gas and Electric Heating

(Continuing Education Course)

This is a study of the procedures and principles used in servicing heating systems, including gas-fired and electric furnaces.

Anthropology

ANTH 2302 Introduction to Archaeology (4503015125)

This study of human prehistory chronicles the major cultural developments in humanity's past and explores the unique methods archeologists use to retrieve, process, and analyze material culture. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

ANTH 2346 General Anthropology (4502015125)

This is a study of human beings, their antecedents and related primates, and their cultural behavior and institutions. It introduces the major subfields: physical and cultural anthropology, archaeology, linguistics, and ethnology. Prerequisites: Reading level 6 and Writing level 6. (3:3-0)

ANTH 2351 Cultural Anthropology (4502015325)

(Formerly Anthropology 2311)

This survey of cultures around the world attempts to explain the similarities and differences in human behavior through an examination of the theories and methods of anthropology, including social and political organization, ethnicity, language, and beliefs in the supernatural. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

Applied Computer Electronics Technology

((See Electronics Technology))

Course Descriptions

Art and Visual Communications

ARTC 1302 Digital Imaging I (130409)

This course teaches digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image acquisitions. (3:2-4)

ARTC 1317 Design Communication I (500409)

This is an introductory study of design development relating to graphic design terminology, tools, media, and layout and design concepts. Topics include integration of type, images, and other design elements, and developing computer skills in industry standard computer programs. Students will not receive credit for both ARTC 1317 and ARTS 2313. Prerequisites: ARTC 1325 or ARTS 2348 or concurrent enrollment with ARTC 1325 or ARTS 2348 with department chair approval. (3:2-4)

ARTC 1321 Illustration Techniques (500402)

(Formerly ARTC 1350, ARTS 1379)

This is a study of illustration techniques in various media. Emphasis on creative interpretation and disciplined draftsmanship for visual communication of ideas. Prerequisites: ARTC 1317, ARTS 2313 or approval of department chair. (3:2-4)

ARTC 1325 Introduction to Computer Graphics (110803)

(Formerly ARTS 1170)

This is a survey of computer design concepts, terminology, processes, and procedures. Topics include computer graphics, hardware, electronic images, electronic publishing, vector-based graphics, and interactive multimedia. Students will not receive credit for both ARTC 1325 and ARTS 2348. (3:2-4)

ARTC 1327 Typography (500409)

(Formerly ARTS 1374)

A study of letter forms and typographic concepts as elements of graphic communication. Emphasis on developing a current, practical typographic knowledge based on industry standards. (3:2-4)

ARTC 1353 Computer Illustration (500402)

Students explore computer programs with applications to illustration and photo manipulation and file management for reproduction. Emphasis on concept development in print digital delivery. Prerequisites: ARTC 1321 or approval of department chair. (3:2-4)

ARTC 2331 Illustration Concepts (500402)

This is an advanced study of different painting media utilizing both digital and traditional tools. Emphasis on conceptualization and composition as they relate to "real world" assignments. Prerequisites: ARTC 1353 or approval of department chair. (3:2-4)

ARTC 2335 Portfolio Development for Graphic Design (500402)

Students prepare a portfolio comprised of completed graphic design class projects. Evaluation and demonstration of portfolio presentation methods appropriate to the student's specific area of study are explored. Prerequisite: ARTC 2314, ARTC 2347. (3:2-4)

ARTC 2341 3-D Animation II (100304)

(Not offered after Summer 2009)

This course focuses on skill development in three-dimensional modeling and rendering techniques using lighting, staging, and special effects for digital output. Emphasis on the production of three-dimensional (3-D) animation as final digital outputting using modeling, rendering, animation, and outputting software. Prerequisites: ARTV 1345, ARTV 1341, or approval of department chair. (3:2-4)

ARTC 2347 Design Communication II (500409)

(Formerly ARTS 2373)

This course offers general practice in commercial art and production. Prerequisites: ARTC 1317 or ARTS 2313. Students will not receive credit for both ARTS 2314 and ARTC 2347. (3:2-4)

ARTC 2366 Field Experience- Graphics Design, Commercial Art and Illustration (500402)

(Formerly ARTS 2375)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. The course may be taken for credit

in conjunction with each degree or certificate earned. Prerequisites: ARTS 2314, ARTC 2347 or approval of department chair. (3:1-20)

ARTS 1301 Art Appreciation (5007035126)

(Formerly ART 133, 1313)

This is a general education course open to art and non-art majors. It focuses on design principles from a layman's point of view, and relates evaluation of selected works in the fine and applied visual arts to everyday life. Prerequisite: Reading level 6. (3:3-0)

ARTS 1303 Art History I (5007035226)

(Formerly ART 1320)

This is a critical and analytical study of the great historical works of fine and applied visual arts from the prehistoric era through the medieval period. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

ARTS 1304 Art History II (5007035226)

(Formerly ART 1321)

This is a critical and analytical study of the great historical works of fine and applied visual arts from the Renaissance through the modern era. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

ARTS 1311 Design I (5004015326)

(Formerly ART 131, 1311)

This course emphasizes two-dimensional design, including the fundamentals of line, color, form, texture, shape, space, and arrangement. (3:2-4)

ARTS 1312 Design II (5004015326)

(Formerly ART 132, 1312)

This continuation and expansion of Design I, includes the study of compositional principles of two- and three-dimensional art, and the creative and expressive use of media. Prerequisite: ARTS 1311. (3:2-4)

ARTS 1316 Drawing I (5007055226)

(Formerly ART 135, 1315)

This beginning course investigates a variety of media, techniques and subjects, exploring perceptual and descriptive possibilities with consideration of drawing as a developmental process, as well as an end in itself. (3:2-4)

Course Descriptions

ARTS 1317 Drawing II (5007055226)

(Formerly ART 136, 1316)

Expansion of drawing I, this course stresses expressive and conceptual aspects of drawing, including the human figure within a spatial environment. Prerequisite: ARTS 1316. (3:2-4)

ARTS 2266 Studies in Contemporary Art (5007035326)

(Formerly ARTS 2276)

(Not offered after Fall 2009)

This in-depth study of current concerns and practices in the visual arts stresses individually directed studio work. Topics may include, but are not limited to, design, drawing, painting, sculpture, ceramics, photography and advertising art. Producing a transfer or job-oriented portfolio will be emphasized. Prerequisite: Advanced sophomore standing and departmental approval. May be repeated one time for credit. (2:1-4)

ARTS 2313 Design Communications I (5004015126)

(Formerly ARTS 2351)

This is an introductory study of design development relating to graphic design technology, tools, media, layout, and design concepts. Topics include integration of type, images, and other design elements, and developing computer skills in industry standard computer programs. Students will not receive credit for both ARTC 1317 and ARTS 2313. Prerequisite: ARTC 1325 or ARTS 2348 or concurrent enrollment with ARTC 1325 or ARTS 2348 with department approval. (3:2-4)

ARTS 2314 Design Communications II (5004015126)

(Formerly ARTS 2352)

This course offers general practice in commercial art and production. Prerequisites: ARTC 1317 or ARTS 2313. Students will not receive credit for both ARTS 2314 and ARTC 2347. (3:2-4)

ARTS 2316 Painting I (5007085226)

(Formerly ART 231, 2311)

This course explores the potentials of painting media, with emphasis on color and composition. Prerequisites (these apply only to students transferring credits to a senior college.): ARTS 1312 and 1317, or approval of department chair. (3:2-4)

ARTS 2317 Painting II (5007085226)

(Formerly ART 232, 2312)

This is a continuation of painting I, with emphasis on individual expression. Prerequisite: ARTS 2316 or approval of department chair. (3:2-4)

ARTS 2323 Life Drawing I (5007085326)

(Formerly ARTS 2323 Drawing III)

Life drawing I is a studio course emphasizing the structure and action of the human figure. Prerequisite: ARTS 1317 (3:2-4)

ARTS 2324 Life Drawing II (5007085326)

(Formerly ARTS 2324 Drawing IV)

This is a further investigation of drawing the human figure, with emphasis on individual expression. Prerequisite: ARTS 2323 (3:2-4)

ARTS 2326 Sculpture I (5007095126)

(Formerly ART 237, 2317)

This is an exploration of various sculptural approaches in a variety of media, including additive and subtractive techniques. Prerequisites (these apply only to students transferring credits to a senior college.): ARTS 1312 and 1317, or approval of department chair. (3:2-4)

ARTS 2327 Sculpture II (5007095126)

(Formerly ART 238, 2318)

A continuation of sculpture I, this course emphasizes individual expression. Prerequisite: ARTS 2326 or approval of department chair. (3:2-4)

ARTS 2333 Printmaking I (5007105126)

This is an introduction to printmaking, including monoprints, relief, intaglio, and serigraphy. Prerequisites (These apply only to students transferring credits to a senior college.): ARTS 1312 and 1317 or approval of department chair. (3:2-4)

ARTS 2334 Printmaking II (5007105126)

A continuation of printmaking I, this course emphasizes individual expression. Prerequisites: ARTS 2333 or approval of department chair. (3:2-4)

ARTS 2341 Art Metals I (5007135126)

(Formerly ARTS 2341 Jewelry & Metalsmithing)

This is a basic course in the fabrication and design of jewelry and metalsmithing. Prerequisites: ARTS 1312 and 1317, or approval of department chair. (3:2-4)

ARTS 2342 Art Metals II (5007135126)

(Formerly ARTS 2342 Jewelry & Metalsmithing)

This is an intermediate course in the fabrication and design of jewelry and metalsmithing. Prerequisites: ARTS 2341 or approval of department chair. (3:2-4)

ARTS 2346 Ceramics I (5007115126)

(Formerly ART 235, 2319)

A studio course, this is an introduction to basic ceramic processes and an exploration of clay as an artistic medium, including mechanical (wheel-thrown) and hand-built techniques, and glazing and firing processes. Prerequisite: ARTS 1312 or approval of department chair. (3:2-4)

ARTS 2347 Ceramics II (5007115126)

(Formerly ART 236, 2320)

A studio course, this continuation of ARTS 2346 explores clay as an artistic medium, concentrating on combinations of mechanical and hand-built techniques. Prerequisite: ARTS 2346. (3:2-4)

ARTS 2348 Digital Art I (5004025226)

A studio art course that explores the potential of the computer hardware and software medium for their visual, conceptual, and practical uses in the visual arts. Students will not receive credit for both ARTC 1325 and ARTS 2348. (3:2-4)

ARTS 2349 Digital Art II (5004025226)

Studio art course that expands upon Digital Art I (ARTS 2348). This course stresses the use of industry standard software applications such as Adobe Photoshop. Course will emphasize both creative and technical elements of image creation, image acquisition, file formats, output devices, and color systems. Prerequisite: ARTS 1301 or ARTS 1303 or ARTS 1304. Reading Level 6, Writing Level 6. (3:2-4)

ARTS 2356 Fine Arts Photography I (5006055126)

This is a beginning course in the taking, developing and printing of photographs. Students receive instruction in photographic principles and are given assignments to complete in the laboratory periods or outside class. The College furnishes darkroom facilities and a limited number of cameras. Students will not receive credit for both ARTS 2356 and COMM 1318. Prerequisites for art majors: ARTS 1312 and ARTS 1317, or approval of department chair. (3:2-4)

ARTS 2357 Fine Arts Photography II (5006055226)

This course offers continued development of techniques, with emphasis on content and composition of photographs, including experience in a variety of professional and technical areas. Students will not receive credit for both ARTS 2357 and COMM 1319. Prerequisite: COMM 1318 or ARTS 2356 or approval of department chair. (3:2-4)

Course Descriptions

ARTS 2366 Watercolor I (5007085326)

This course introduces the basic techniques and materials of transparent and opaque watercolors. Prerequisites (These apply only to students transferring credits to a senior college.): ARTS 1312 and ARTS 1317, or approval of department chair. (3:2-4)

ARTS 2367 Watercolor II (5007085326)

A continuation of Watercolor I, this course places emphasis on individual expression. Prerequisite: ARTS 2366 or approval of department chair. (3:2-4)

ARTS 2389 Academic Cooperative-Art (2401035212)

An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the student will set specific goals and objectives in the study of studio art and/or art history. Prerequisite: ARTS 2348 and ARTS 2349. Reading Level 6, Writing Level 6. (3:0-21)

ARTV 1303 Basic Animation (100304)

(Formerly ARTC 1301)

This course provides an examination of concepts, characters, and storyboard for basic animation production. It emphasizes creating movement and expression utilizing traditionally or digitally generated image sequences. Prerequisite: IMED 1301 or approval of department chair. (3:2-4)

ARTV 1341 3-D Animation I (100304)

(Formerly ARTC 1341)

This course offers three-dimensional (3-D) modeling and rendering techniques, including lighting, staging camera, and special effects. Emphasis on 3-D modeling building blocks, using primitives to create simple and complex objects. Prerequisites: ARTV 1345 or approval of department chair. (3:2-4)

ARTV 1345 3-D Modeling and Rendering (100304)

(Formerly ARTC 1345)

This course focuses on techniques of three-dimensional (3-D) modeling utilizing appropriate software. Topics include the creation and modification of 3-D geometric shapes, use of a variety of rendering techniques, camera light sources, and surface mapping. Prerequisites: ARTV 1303 or approval of department chair. (3:2-4)

ARTV 1351 Digital Video (100304)

(Formerly IMED 1351)

This is a course in producing and editing video and sound for multimedia or web productions. It emphasizes the capture, editing, and outputting of video using a desktop digital video workstation. Prerequisites: ARTS 2314 or approval of department chair. (3:2-4)

ARTV 2301 2-D Animation I (100304)

(Formerly ARTV 1301)

Skill development in the use of software to develop storyboards and two-dimensional animation including creating, importing, and sequencing media elements to create multimedia presentation. Emphasis on conceptualization, creativity, and visual aesthetics. Prerequisites: ARTV 1303 (3:2-4)

ARTV 2351 3D Animation II (100304)

(Formerly ARTC 2341)

This is an advanced level 3-D course utilizing animation tools and techniques used to create movement. The emphasis is on advanced animation techniques. Pre-requisites: ARTV 1345, ARTV 1341, or approval of department chair (3:2-4).

GRPH 2309 Electronic Pre-press I (480208)

(Formerly ARTC 2309)

This course focuses on theory and techniques for pre-press preparation, using industry-standard software for final file output. Topics include the procedures and problems involved in computer file preparation, ranging from trapping, color separations and resolutions to printing basics and service bureaus. Prerequisites: ARTC 2347 or ARTS 2314 or approval of department chair. (3:2-4)

GRPH 2370 Electronic Pre-Press II (500402)

(Formerly ARTC 2370)

This is a continuation of electronic pre-press I, with continued exploration of computer file preparation, including use of Postscript, rip raster image processing, trapping, color separation, and resolutions. Emphasis on individual progress. Prerequisites: GRPH 2309 or approval of department chair. (3:2-4)

IMED 1301 Introduction to Multimedia (110801)

This is a survey of theories, elements, and hardware/software components of multimedia. Topics include digital image editing, digital sound and video editing, animation, web page development, and interactive presentations. Emphasis on conceptualizing and producing effective multimedia presentations. Prerequisites: ARTC 1325 or approval of department chair. (3:2-4)

IMED 1316 Web Page Design I (110801)

(Formerly ARTS 2376)

This course offers instruction in Internet web page design and related graphic design issues, including mark-up languages, websites, Internet access software, and interactive topics. Prerequisites: ARTC 1325 or approval of department chair. (3:2-4)

IMED 2315 Web Page Design II (110801)

This course is a study of hypertext mark-up language (HTML) and interesting layout techniques for creating and engaging well-designed web pages. Emphasis on identifying the target audience and producing a website that responds to specific physical and technical limitations, cultural concerns, and legal issues. Prerequisites: IMED 1316 or approval of department chair. (3:2-4)

IMED 2345 Interactive Multimedia (110801)

(Formerly ARTS 1376)

This course offers instruction in the use of graphics and scripting language to create time-based animation and interactive multimedia projects using industry standard authoring software. Topics include building a user interface, writing script, using commands and functions, testing, and debugging. Prerequisites: IMED 1301 or approval of department chair. (3:2-4)

ITSW 1310 Introduction to Presentation Graphics Software (110301)

This course offers instruction in the utilization of presentation software to produce multimedia presentations. Graphics, text, sound, animation and/or video may be used in presentation development. Prerequisites: ARTS 2352 or approval of department chair. (3:2-4)

Audio Engineering

(See Music)

Automotive Collision Repair Technology

ABDR 1303 Vehicle Design and Structural Analysis (470603)

This introduction to the collision repair industry emphasizes safety, professionalism, and vehicle structural design. Prerequisite: Reading level 4. (3:2-2)

ABDR 1307 Auto Body Welding (470603)

(Formerly ABDR 1207)

This is a study of industry and standard welding and cutting procedures. Prerequisite: Reading level 4. (3:2-2)

ABDR 1315 Vehicle Interior Trim and Hardware (470603)

(Formerly ABRT 2313)

This is an in-depth study of vehicle trim and glass service. Prerequisite: Reading level 4. (3:2-2)

ABDR 1323 Front and Rear Wheel Alignment (470603)

This is an in-depth study of vehicle steering components including alignment, tire rotation, and balancing. Prerequisite: Reading level 4. (3:2-2)

ABDR 1431 Basic Refinishing (470603)

(Formerly ABRT 1319)

This is an introduction to current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Emphasis on surface preparation, masking techniques, and refinishing of trim and replacement parts. Prerequisite: Reading level 4. (4:3-3)

ABDR 1441 Structural Analysis and Damage Repair I (470603)

(Formerly ABRT 1521, ABDR 1541)

This course offers expanded training in the roughing and shaping procedures on automotive sheet metal necessary to make satisfactory body repairs. Emphasis on the alignment of component parts such as doors, hoods, front-end assemblies, and deck lids. Prerequisite: Reading level 4. (4:3-3)

ABDR 1449 Automotive Plastic and Sheet Molded Compound Repair (470603)

(Formerly ABDR 1349)

This is a comprehensive course in repair of interior and exterior plastics, including the use of various types of adhesives and plastic welding. Prerequisite: Reading level 4. (4:3-3)

ABDR 1519 Basic Metal Repair (470603)

(Formerly ABRT 1320)

This course offers in-depth coverage of basic metal principles and working techniques, including proper tool usage and product application. Prerequisite: Reading level 4. (5:3-5)

ABDR 1555 Minor Metal Repair (470603)

(Formerly ABRT 2314)

This is a course in sheet metal alignment principles using mechanical and hydraulic equipment. Emphasis on attachment devices used to straighten and align exterior body panels. Prerequisite: Reading level 4. (5:3-5)

ABDR 1558 Intermediate Refinishing (470603)

(Formerly ABDR 1458)

This course offers expanded training in mixing and spraying of automotive topcoats. Emphasis on formula ingredients, reducing, thinning, and special spraying techniques. This course also introduces partial panel refinishing techniques and current industry paint removal techniques. Prerequisite: Reading level 4. (5:3-5)

ABDR 2255 Collision Repair Estimating (470603)

(Formerly ABDR 2355)

This is an advanced course in collision estimating and development of an accurate damage report. Prerequisite: Reading level 4. (2:2-1)

ABDR 2257 Collision Repair Shop Management (470603)

This is a study of methods and equipment used in collision repair shops to improve management functions and profitability. Prerequisite: Reading level 4. (2:2-1)

ABDR 2353 Color Analysis and Paint Matching (470603)

This is an advanced course in color theory, color analysis, tinting, and advanced blending techniques for commercially acceptable paint matching. Prerequisite: Reading level 4. (3:2-2)

ABDR 2380 Cooperative Education – Autobody/Collision and Repair Technology/Technician (470603)

(Formerly ABRT 2317, ABDR 2366)

Career-related activities encountered in the student's area of specialization are offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. This course also includes a lecture component. This may be a paid or unpaid experience. Prerequisite: Reading level 4. (3:1-14).

ABDR 2502 Auto Body Mechanical and Electrical Service (470603)

This is a course in the repair, replacement, and/or service of collision damaged mechanical or electrical systems. Topics include drive train removal, reinstallation and service; cooling system service and repair; exhaust system service; and emission control systems. Additional topics include wire and connector repair, reading diagrams, and troubleshooting. Prerequisites: Reading level 4. (5:3-5).

ABDR 2541 Major Collision Repair and Panel Replacement (470603)

Focusing on instruction in preparation of vehicles for major repair processes, this course covers interpreting information from damage reports, planning repair sequences, selecting appropriate tools, and organizing removed parts for re-installation. Prerequisite: Reading level 4. (5:3-5)

ABDR 2549 Advanced Refinishing (470603)

(Formerly ABRT 2513, ABDR 2249)

This course offers skill development in multi-stage refinishing techniques particularly in identification of problems and solutions in color matching and partial panel refinishing. Prerequisite: Reading level 4. (5:3-5).

ABDR 2551 Specialized Refinishing Techniques (470603)

(Formerly ABRT 2315)

This course focuses on advanced topics in specialty automotive refinishing. Emphasis on refinishing of interior plastics, fiberglass, and aluminum and galvanized panels, as well as on custom graphics and current industry innovations. Prerequisite: Reading level 4. (5:3-5)

Course Descriptions

Automotive Technology

AUMT 1305 Introduction to Automotive Technology (470604)

(Formerly ASET 1311)

An introduction to the automotive industry, including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1310 Automotive Brake Systems (470604)

(Formerly AUTO 1517, AUMT 1410)

This course focuses on the operation and repair of drum/disc type brake systems, with emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, and anti-lock brake systems and parking brakes. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1316 Steering and Suspension (470604)

(Formerly AUTO 1517, AUMT 1416)

The course focuses on the theory and operation of automotive suspension and steering systems, including tire and wheel problem diagnosis, component repair, and alignment procedures. It may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1345 Automotive Heating and Air Conditioning (470604)

(Formerly AUTO 2517, AUMT 1445)

This course focuses on the theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. It covers EPA guidelines for refrigerant handling and new refrigerant replacements. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1407 Automotive Electrical Systems (470604)

(Formerly AUTO 1512)

This course provides an overview of automotive electrical systems, including topics in operational theory; testing, diagnosis, and repair of batteries; charging and starting systems; and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 1419 Automotive Engine Repair (470604)

(Formerly AUTO 1513)

This course covers the fundamentals of engine operation, diagnosis and repair, including lubrication systems and cooling systems. Emphasis on overhaul of selected engines; identification and inspection; and measurements; and disassembly, repair, and reassembly of the engine. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2311 Automotive Electronic Controls (470604)

(Formerly AUMT 2434)

This is a study of electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2313 Manual Drive Train and Axles (470604)

(Formerly AUTO 1516, AUMT 2413)

This is a study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials, with emphasis on the diagnosis and repair of transmissions and drive lines. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2340 Automotive Alternative Fuels (470604)

(Not offered after Summer 2009)

This course focuses on the composition and use of various alternative automobile fuels, including the use of retrofit procedures and applications, emission standards, availability, and cost effectiveness. An overview of federal and state legislation will also be covered. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2357 Automotive Alternative Fuels (470604)

(Formerly AUMT 2340)

This course is a study of the composition and use of various alternative automobile fuels, including the use of retrofit procedures and applications, emission standards, availability, and cost effectiveness. An overview of federal and state legislation concerning fuels will also be covered. The course may be taught with manufacturer specific focus (3:2-4)

AUMT 2371 Automotive Hybrid Systems (470604)

This overview of automotive hybrid systems includes topics in the theory, testing, diagnosis, and repair of hybrid systems. The operating principles for gasoline/electric propulsion systems, techniques for maintenance and repair, and how they differ from the procedures used for traditional gasoline powered vehicles are discussed. The course may be taught with manufacturer-specific focus. (3:2-2)

AUMT 2388 Internship–Automobile/Automotive Mechanics Technology/Technician

(Formerly ASET 2414, AUMT 2389)

This course offers experience external to the College for an advanced student in a specialized field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. The course may be repeated if topics and learning outcomes vary. (3:0-15)

AUMT 2417 Engine Performance Analysis I (470604)

(Formerly AUTO 2511)

This course focuses on the theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Students learn the use of basic engine performance diagnostic equipment. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2425 Automotive Transmission and Transaxles (470604)

(Formerly AUTO 1514)

This is a study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. It covers diagnosis, disassembly, and assembly procedures, with emphasis on the use of special tools and proper repair techniques. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2455 Special Topics in Auto/Automotive Mechanic/Technician (Engine Machining) (470604)

(Formerly AUTO 2513)

This is an in-depth study of precision engine rebuilding, cylinder reconditioning, and crack repair. Machines and equipment necessary to complete an engine repair will be utilized. Prerequisite: AUMT 1419 or department chair approval. (4:2-6)

Honda Professional Career Training (PACT)

AUMT 1305 Introduction to Automotive Technology (470604)

(Formerly ASET 1311)

This introduction to the automotive industry, includes automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1310 Automotive Brake Systems (470604)

(Formerly ASET 1313)

This course focuses on the operation and repair of drum/disc type brake systems, with emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, and anti-lock brake systems and parking brakes. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1316 Suspension and Steering (470604)

(Formerly ASET 1314)

This course focuses on the theory and operation of automotive suspension and steering systems, including tire and wheel problem diagnosis, component repair, and alignment procedures. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1345 Automotive Heating and Air Conditioning (470604)

(Formerly ASET 2311)

This course focuses on the theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. It also covers EPA guidelines for refrigerant handling and new refrigerant replacements. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1407 Automotive Electrical Systems (470604)

(Formerly AUTO 1512)

This course provides an overview of automotive electrical systems, including topics in operational theory; testing, diagnosis, and repair of batteries; charging and starting systems; and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 1419 Automotive Engine Repair (470604)

(Formerly AUTO 1513)

This course covers the fundamentals of engine operation, diagnosis and repair, including lubrication systems and cooling systems. Emphasis on overhaul of selected engines; identification and inspection; and measurements; and disassembly, repair, and reassembly of the engine. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2311 Automotive Electronic Controls

(Formerly AUMT 2434)

This is a study of electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2313 Automotive Drive Train and Axles

(Formerly AUTO 1516, AUMT 2413)

This is a study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials, with emphasis on the diagnosis and repair of transmissions and drive lines. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2388 Internship–Automobile/Automotive Mechanics Technology/Technician

(Formerly ASET 2414, AUMT 2389)

This course offers experience external to the College for an advanced student in a specialized field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. The course may be repeated if topics and learning outcomes vary. (3:0-15)

AUMT 2417 Automotive Engine Performance Analysis I

(Formerly AUTO 2511)

This course focuses on the theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Students learn the use of basic engine performance diagnostic equipment. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2425 Automotive Automatic Transmission and Transaxles

(Formerly AUTO 1514)

This is a study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. It covers diagnosis, disassembly, and assembly procedures, with emphasis on the use of special tools and proper repair techniques. The course may be taught with manufacturer-specific focus. (4:2-6)

College Automotive Program (CAP) Chrysler

AUMT 1280 Cooperative Education Auto/Automotive Mechanic/Technician (470604)

(Formerly AUTO 2310, AUMT 1380)

Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the College, employer, and student. Under supervision of the College and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the work experience. (2:1-10)

AUMT 1305 Introduction to Automotive Technology (470604)

(Formerly ASET 1311)

This introduction to the automotive industry, includes automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1310 Automotive Brake Systems (470604)

(Formerly ASEP 2311)

This course focuses on the operation and repair of drum/disc type brake systems, with emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, and anti-lock brake systems and parking brakes. The course may be taught with manufacturer-specific focus. (3:2-4)

Course Descriptions

AUMT 1316 Suspension and Steering (470604)

(Formerly ASET 1314)

This course focuses on the theory and operation of automotive suspension and steering systems, including tire and wheel problem diagnosis, component repair, and alignment procedures. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1345 Automotive Heating and Air Conditioning (470604)

(Formerly ASET 2311)

This course focuses on the theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. It also covers EPA guidelines for refrigerant handling and new refrigerant replacements. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1407 Automotive Electrical Systems (470604)

(Formerly ASET 1411)

This course provides an overview of automotive electrical systems, including topics in operational theory; testing, diagnosis, and repair of batteries; charging and starting systems; and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 1419 Automotive Engine Repair (470604)

(Formerly AUMT 1319, ASET 1312)

This course covers the fundamentals of engine operation, diagnosis and repair, including lubrication systems and cooling systems. Emphasis on overhaul of selected engines; identification and inspection; and measurements; and disassembly, repair, and reassembly of the engine. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2311 Automotive Electronic Controls (470604)

(Formerly AUMT 2434)

This is a study of electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2313 Manual Drive Train and Axles (470604)

(Formerly ASET 2312)

This is a study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials, with emphasis on the diagnosis and repair of transmissions and drive lines. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2388 Internship-Auto/Automotive Mechanic/Technician (470604)

(Formerly ASET 2414, AUMT 2389)

This course offers experience external to the College for an advanced student in a specialized field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. The course may be repeated if topics and learning outcomes vary. (3:0-15)

AUMT 2417 Engine Performance Analysis I (470604)

(Formerly AUMT 2317, 2437)

This course focuses on the theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Students learn the use of basic engine performance diagnostic equipment. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2425 Automotive Transmission and Transaxle (470604)

(Formerly ASET 2411)

This is a study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. It covers diagnosis, disassembly, and assembly procedures, with emphasis on the use of special tools and proper repair techniques. The course may be taught with manufacturer-specific focus. (4:2-6)

Automotive Student Service Educational Training Program - Ford Motor Company

AUMT 1280 Cooperative Education Auto/Automotive Mechanic/Technician (470604)

(Formerly AUTO 2310, AUMT 1380)

Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the College, employer, and student. Under supervision of the College and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the work experience. (2:1-10)

AUMT 1305 Introduction to Automotive Technology (470604)

(Formerly ASET 1311)

This introduction to the automotive industry, includes automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1310 Automotive Brake Systems (470604)

(Formerly ASET 1313)

This course focuses on the operation and repair of drum/disc type brake systems, with emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, and anti-lock brake systems and parking brakes. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1316 Suspension and Steering (470604)

(Formerly ASET 1314)

This course focuses on the theory and operation of automotive suspension and steering systems, including tire and wheel problem diagnosis, component repair, and alignment procedures. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1345 Automotive Heating and Air Conditioning (470604)

(Formerly ASET 2311)

This course focuses on the theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. It also covers EPA guidelines for refrigerant handling and new refrigerant replacements. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1407 Automotive Electrical Systems (470604)

(Formerly ASET 1411)

This course provides an overview of automotive electrical systems, including topics in operational theory; testing, diagnosis, and repair of batteries; charging and starting systems; and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 1419 Automotive Engine Repair (470604)

(Formerly AUMT 1319, ASET 1312)

This course covers the fundamentals of engine operation, diagnosis and repair, including lubrication systems and cooling systems. Emphasis on overhaul of selected engines; identification and inspection; and measurements; and disassembly, repair, and reassembly of the engine. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2311 Automotive Electronic Controls (470604)

(Formerly AUMT 2434)

This is a study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials, with emphasis on the diagnosis and repair of transmissions and drive lines. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2313 Manual Drive Train and Axles (470604)

(Formerly ASET 2312)

This is a study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials, with emphasis on the diagnosis and repair of transmissions and drive lines. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2388 Internship-Auto/Automotive Mechanic/Technician (470604)

(Formerly ASET 2414, AUMT 2389)

This course offers experience external to the College for an advanced student in a specialized field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. The course may be repeated if topics and learning outcomes vary. (3:0-15)

AUMT 2417 Engine Performance Analysis I (470604)

(Formerly AUMT 2317, 2437)

This course focuses on the theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Students learn the use of basic engine performance diagnostic equipment. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2425 Automotive Transmission and Transaxle (470604)

(Formerly ASET 2411)

This is a study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. It covers diagnosis, disassembly, and assembly procedures, with emphasis on the use of special tools and proper repair techniques. The course may be taught with manufacturer-specific focus. (4:2-6)

Automotive Service Education Program - General Motors

AUMT 1305 Introduction to Automotive Technology (470604)

(Formerly ASEP 1311)

This introduction to the automotive industry, includes automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1310 Automotive Brake Systems (470604)

(Formerly ASEP 2311)

This course focuses on the operation and repair of drum/disc type brake systems, with emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, and anti-lock brake systems and parking brakes. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1316 Suspension and Steering (470604)

(Formerly ASEP 1312)

This course focuses on the theory and operation of automotive suspension and steering systems, including tire and wheel problem diagnosis, component repair, and alignment procedures. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1345 Automotive Heating and Air Conditioning (470604)

(Formerly ASEP 1315)

This course focuses on the theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. It also covers EPA guidelines for refrigerant handling and new refrigerant replacements. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1407 Automotive Electrical Systems (470604)

(Formerly ASEP 1412)

This course provides an overview of automotive electrical systems, including topics in operational theory; testing, diagnosis, and repair of batteries; charging and starting systems; and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 1419 Automotive Engine Repair (470604)

(Formerly ASEP 1411)

This course covers the fundamentals of engine operation, diagnosis and repair, including lubrication systems and cooling systems. Emphasis on overhaul of selected engines; identification and inspection; and measurements; and disassembly, repair, and reassembly of the engine. The course may be taught with manufacturer-specific focus. (4:2-6)

Course Descriptions

AUMT 2311 Automotive Electronic Controls (470604)

(Formerly AUMT 2434)

This is a study of electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2313 Manual Drive Train and Axles (470604)

(Formerly ASET 2312)

This is a study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials, with emphasis on the diagnosis and repair of transmissions and drive lines. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2388 Internship-Auto/Automotive Mechanic/Technician (470604)

(Formerly ASEP 2414)

This course offers experience external to the College for an advanced student in a specialized field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. The course may be repeated if topics and learning outcomes vary. (3:0-15)

AUMT 2417 Engine Performance Analysis I (470604)

(Formerly ASEP 2411)

This course focuses on the theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Students learn the use of basic engine performance diagnostic equipment. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2425 Automatic Transmission and Transaxle (470604)

(Formerly ASEP 2412)

This is a study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. It covers diagnosis, disassembly, and assembly procedures, with emphasis on the use of special tools and proper repair techniques. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2434 Engine Performance Analysis II (470604)

(Formerly ASEP 2313)

This is a course in diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems; and the proper use of advanced engine performance diagnostic equipment. The course may be taught with manufacturer-specific focus. (4:2-6)

Toyota Technical Education Network (TTEN)

AUMT 1305 Introduction to Automotive Technology (470604)

(Formerly ASET 1311)

This introduction to the automotive industry, includes automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automotive maintenance. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1310 Automotive Brake Systems (470604)

(Formerly TTEN 2312)

This course focuses on the operation and repair of drum/disc type brake systems, with emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, and anti-lock brake systems and parking brakes. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1316 Suspension and Steering (470604)

(Formerly TTEN 2312)

This course focuses on the theory and operation of automotive suspension and steering systems, including tire and wheel problem diagnosis, component repair, and alignment procedures. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1345 Automotive Heating and Air Conditioning (470604)

(Formerly TTEN 2311)

This course focuses on the theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. It also covers EPA guidelines for refrigerant handling and new refrigerant replacements. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 1407 Automotive Electrical Systems (470604)

(Formerly ASET 1411)

This course provides an overview of automotive electrical systems, including topics in operational theory; testing, diagnosis, and repair of batteries; charging and starting systems; and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 1419 Automotive Engine Repair (470604)

(Formerly AUMT 1319, ASET 1312)

This course covers the fundamentals of engine operation, diagnosis and repair, including lubrication systems and cooling systems. Emphasis on overhaul of selected engines; identification and inspection; and measurements; and disassembly, repair, and reassembly of the engine. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2311 Automotive Electronic Controls (470604)

(Formerly AUMT 2434)

This is a study of electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2313 Manual Drive Train and Axles (470604)

(Formerly TTEN 2412)

This is a study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials, with emphasis on the diagnosis and repair of transmissions and drive lines. The course may be taught with manufacturer-specific focus. (3:2-4)

AUMT 2321 Electrical Lighting and Accessories (470604)

This is a course in repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. The course may be taught with manufacturer-specific focus. (3:2:4)

AUMT 2388 Internship-Auto/ Automotive Mechanic/Technician (470604)

(Formerly ASEP 2414)

This course offers experience external to the College for an advanced student in a specialized field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. The course may be repeated if topics and learning outcomes vary. (3:0-15)

AUMT 2417 Engine Performance Analysis I (470604)

(Formerly AUMT 2317, 2437)

This course focuses on the theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Students learn the use of basic engine performance diagnostic equipment. The course may be taught with manufacturer-specific focus. (4:2-6)

AUMT 2425 Automatic Transmission and Transaxle (470604)

(Formerly TTEN 2411)

This is a study of the operation, hydraulic principles, and related circuits of modern automatic transmissions and automatic transaxles. It covers diagnosis, disassembly, and assembly procedures, with emphasis on the use of special tools and proper repair techniques. The course may be taught with manufacturer-specific focus. (4:2-6)

Biology

BIOL 1406 General Biology I (2601015103)

General biology I is a contemporary course covering the scientific method, cellular and molecular biology, biochemistry, classical and human genetics, and evolution. Prerequisite: Reading level 6. (4:3-3)

BIOL 1407 General Biology II (2601015103)

General biology II is a survey of viruses, Kingdoms Monera, Protista, Fungi, Plantae, and Animalia. The study of organism systems is stressed and integrated. Development and ecology topics are included. Prerequisite: Reading level 6. (4:3-3)

BIOL 1408 Biology for Non- Science Majors I: Unity of Life (260101513)

This is a general biology course for non-majors that addresses biological concepts encountered in everyday life. Topics include the nature of science, cellular and molecular biology, biotechnology, classical and human genetics, and evolution with emphasis on applications and current issues. This course applies toward the core curriculum requirements for natural science for students pursuing A.A. degrees. A student may not use both BIOL 1406 and BIOL 1408 to satisfy the core. Prerequisites: Reading level 6 (4:3-3)

BIOL 1409 Biology for Non- Science Majors II: Diversity of Life (260101513)

This is a general biology course for non-majors that addresses biological concepts encountered in everyday life. Topics include a survey of viruses and the domains of life, study of organism systems, and ecology with emphasis on human applications and current issues. This course applies toward the core curriculum requirements for natural science for students pursuing A.A. degrees. A student may not use both BIOL 1407 and BIOL 1409 to satisfy the core. Prerequisites: Reading level 6 (4:3-3)

BIOL 1411 General Botany (2603015103)

(Formerly Biology 142, 1412)

This is a course in the fundamental principles of plant life. Focus is on the structure, physiology, taxonomy, and life histories of plants. Basic principles of heredity, ecology, distribution, adaptation, populations, and evolution of organisms are included. Prerequisite: Reading level 6. (4:3-3)

BIOL 1413 General Zoology (2607015103)

(Formerly Biology 141, 1411)

This is a course in the fundamental principles of living animals. It focuses on the structure and physiology of animals, animal development, and taxonomy, with considerable reference to man. Prerequisite: Reading level 6. (4:3-3)

BIOL 2305 Pathophysiology (2607075103)

Pathophysiology is a three-credit lecture course appropriate for students preparing for a nursing career or as an elective for a biology major. This is a specialized study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems as they relate to the study of human disease. Objectives include a study

of general physiological factors involved in the disease process as well as pathology affecting different human systems. Prerequisites: BIOL 2401 or BIOL 2402 or BIOL 1406 AND BIOL 1407. (3:3-0)

BIOL 2316 Principles of Genetics (Hereditry) (2608045103)

(Formerly Biology 231, 2311)

This study of the principles of inheritance and variation in plant and animal populations emphasizes Mendelian inheritance, molecular genetics, and population genetics. Prerequisites: BIOL 1406 and 1407 or BIOL 1411 and 1413 or approval of department chair and Reading level 7. (3:3-0)

BIOL 2401 Human Anatomy and Physiology I (2607075103)

(Formerly Biology 245, 2415)

This study of chemical and cellular levels of organization focuses on the structure and function of the integumentary, skeletal, muscular, nervous and endocrine systems. Prerequisite: Reading level 7. (4:3-3)

BIOL 2402 Human Anatomy and Physiology II (2607075103)

(Formerly Biology 246, 2416)

The structure and function of the cardiovascular, respiratory, digestive, urinary, and reproductive systems. Basic principles of human genetics are included. Prerequisite: Reading level 7. (4:3-3)

BIOL 2406 Environmental Biology (0301035101)

The course is designed to study the human interaction with, and effect upon, plant and animal communities, with a focus on conservation, pollution, energy, sustainability, and other contemporary ecological problems. It includes a general study of ecological concepts, an introduction to natural resources, the study of the biotic and abiotic interrelationships, and the energy transfer through food chains and food webs. It introduces biological and chemical principles as they relate to the environment. It also introduces laboratory and field approaches to the study of the environment. A student may not receive credit for both BIOL 2306 and BIOL 2406. Prerequisites: Reading level 7, BIOL 1406, 1407, 1411, or 1413. (4:3-3)

Course Descriptions

BIOL 2416 Genetics (2608045103)

This course is designed to give students a comprehensive, in-depth survey of the field of modern genetics. Genetics is concerned with the study of heredity and the molecular basis of physical traits. The broad scope of the discipline extends from the study of simple molecules (DNA structure and function), to inheritance patterns, to populations of organisms. The course is designed with a lecture and laboratory format, meeting three hours per week for lecture and three hours per week for lab, and as such awards four credit hours. Topics include (but are not limited to) Mendelian and non-Mendelian inheritance patterns, the molecular nature of genes, the physical and chemical nature of DNA, biotechnology, and the applications of these topics for medicine and industry. Students may not receive credit for BIOL 2416 and BIOL 2316. Prerequisites: BIOL 1406 and 1407, or 1413 and 1411, or approval of department chairman and Reading level 7. At least one semester of college chemistry is strongly recommended. (4:3-3)

BIOL 2420 Microbiology and Pathology (2605035103)

(Formerly Biology 144, 1414)

This is a study of microbiology and pathology from the standpoint of cause, symptoms, and prevention of disease. Basic principles of immunological responses by the body in relation to visible pathological symptoms are stressed. This course is primarily designed for the student pursuing a degree as a registered nurse. Prerequisites: BIOL 2401 or 2402 or approval by department chair and Reading level 7. A student may not receive credit for both BIOL 2420 and BIOL 2421. (4:3-3)

BIOL 2421 Introductory Microbiology (Bacteriology) (2605035103)

(Formerly Biology 241, 2411)

This course focuses on the morphology, physiology, and taxonomy of microorganisms. It also covers the relation of man to microorganisms in agriculture, industry, sanitation, and disease. Prerequisites: BIOL 1406 and BIOL 1407 or BIOL 1411 and 1413, CHEM 1411 and 1412, sophomore standing, and Reading level 7. Some prerequisites may be waived with permission of department chair. A student may not receive credit for both BIOL 2420 and BIOL 2421. (4:3-3)

BITC 1311 Introduction to Biotechnology (410101)

This introduction to biotechnology includes career exploration, history and applications of DNA/RNA technology, molecular biology, bioethics, and laboratory safety practices. Prerequisites: Reading level 7, Writing level 7, Math level 7. (3:2-1)

ENVR 1401 Environmental Science I: Principles of Environmental Systems (0301035201)

This overview of environmental and urban systems and current global concerns explores scientific, economics, social, and political solutions to environmental problems with emphasis on ethical issues and substitutability. Field trips required. Prerequisites: Reading level 7, Writing level 7, Math level 7. (4:3-3)

ENVR 1402 Environmental Science II: Chemicals in the Environment (0301035201)

This is an overview of chemicals and contaminants in the environment, including description of environmental media; types of contaminants and their properties, their fate, and transport in the environment; potential remediation technologies; and environmental regulation(s). Prerequisites: Reading level 7, Writing level 7, Math level 9. (4:3-3)

Business

BCIS 1305 Business Computer Applications (1102025204)

This course discusses computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business application of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. (3:3-1)

BUSG 2317 Business Law/Commercial (220101)

(Formerly Business Law 235, GENB 2316, BUSI 2302)

This course explores the relationships of law and business as they relate to commercial transactions. Prerequisite: Reading level 7. (3:3-0)

BUSI 1301 Introduction to Business (5201015104)

(Formerly Business Principles 233, GENB 2303, BUSI 1301, BUSG 1301)

This course teaches fundamental business principles, including structure, functions, resources, and operational processes. Prerequisite: Reading level 6. (3:3-0)

BUSI 1304 Business Report Writing and Correspondence (2311015204)

(Formerly GENB 1305)

This study of the principles of effective written and oral communication in business situations focuses on grammar, spelling, punctuation, and sentence structure as employed in business. It also stresses common communication weaknesses identified in today's business employees. (3:3-0)

BUSI 2301 Business Law I (2201015104)

(Formerly Business Law 235, GENB 2315)

Major content areas covered include general principles of law and the legal system, contracts, sales, commercial paper, bank-customer relations, agency, and property. Prerequisite: Reading level 7. (3:3-0)

BUSI 2304 Business Communications (2311015204)

(Formerly Business Communications 230, GENB 2301)

This is a study of the practical principles of word usage, language structure, and writing mechanics. Detailed attention is given to report writing and to the construction of letters concerned with sales, credits, collections, inquiries, adjustments, orders, recommendations, and applications for employment. Prerequisite: BUSI 1304 or Writing level 7. (3:3-0)

Business Management

BMGT 1301 Supervision (520204)

(Formerly Management Development 132, MGTD 1312, MGMT 1312)

This study of the role of the supervisor examines managerial functions as applied to leadership, counseling, motivation, and human skills. Prerequisite: Reading level 4. (3:3-0)

BMGT 1303 Principles of Management (520201)

(Formerly Management Development 231, MGTD 2311, MGMT 2311)

Not offered after Summer 2009.

This course focuses on concepts, terminology, principles, theory and issues that are the substance of the practice of management. Prerequisite: Reading level 4. (3:3-0)

Course Descriptions

BMGT 1313 Principles of Purchasing (520202)

(Formerly Management Development 134, MGTD 1314, MGMT 1314)

This course focuses on the purchasing process as it is related to such topics as inventory control, price determination, vendor selection, negotiation techniques, and ethical issues. (3:3-0)

BMGT 1325 Office Management (520204)

(Formerly Management Development 235, MGTD 2315, MGMT 2315)

Not offered after Summer 2009.

This course examines systems, procedures, and practices related to organizing and planning office work, controlling employees' performance, and exercising leadership skills. Prerequisite: Reading level 4. (3:3-0)

BMGT 1327 Principles of Management (520201)

(Formerly BMGT 1301, MGMT 2311, MGTD 2311, Management 231)

This course focuses on concepts, terminology, principles, theories, and issues that are relevant in the field of management. Prerequisite: Reading level 4. (3:3-0)

BMGT 1331 Production and Operations Management (520205)

(Formerly Management Development 234, MGTD 2314, MGMT 2314)

This course teaches fundamentals of the various techniques used in the practice of production management, including location, design, and resource allocation. Prerequisite: Reading level 4. (3:3-0)

BMGT 1341 Business Ethics (520201)

Discussion of ethical issues, the development of a moral frame of reference and the need for an awareness of social justice in management practices and business activities. Review of ethical responsibilities and relationships between organizational departments, divisions, executive management, and the public. (3:3-0)

BMGT 1391 Special Topics in Business Administration and Management (520201)

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. The course may be repeated a maximum of two times for credit (a total of three times) provided the repeated course covers a different topic. Prerequisites: Reading level 4. (3:3-0)

BMGT 2309 Leadership (520201)

(Formerly BMGT 1325)

This course explores the concepts and styles of leadership, their relation to management, and their impact on the organization. It prepares the student with leadership and communication skills necessary to motivate and identify appropriate principles of leadership in individual, group, and organizational settings. Prerequisite: Reading Level 4. (3:3-0)

BMGT 2368 Practicum (or Field Experience) (520201)

(Formerly Management Development 130, 133, 230, 239 or 2301, Mid-Management 121, 122, 221 or 222, MGTD 2301, MGMT 2375)

This course offers practical training and experience in the workplace supported by an individualized learning plan developed and documented by the employer, college and student. This allows the student to apply classroom theories, concepts, and skills in a workplace environment. The student must be working 20 hours per week in a paid or unpaid position. Prerequisite: Six (6) hours of Business Management courses or approval of the Program Director and Reading Level 4. (3:1-20)

BUSG 2309 Small Business Management (520703)

(Formerly Management of Small Business 237, GENB 2317, BUSI 2317, BUSI 2377)

This is a course on how to start and operate a small business. Topics include facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues. Prerequisite: Reading level 4. (3:3-0)

BUSI 1311 Salesmanship (5218045104)

(Formerly Management Development 136, MGMT 1316)

This course deals with the principles of personal salesmanship; a study of methods, problems, and techniques of motivating customers to buy. (3:3-0)

HRPO 1311 Human Relations (521003)

(Formerly Management Development 131, MGTD 1311, MGMT 1311)

This course teaches practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment. (3:3-0)

HRPO 2301 Human Resources Management (521001)

(Formerly Management Development 232, MGTD 231, MGMT 2312)

This course teaches behavioral and legal approaches to the management of human resources in organizations. Prerequisite: Reading level 4 (3:3-0)

MRKG 1311 Principles of Marketing (521401)

(Formerly Management Development 238, MGTD 2318, MGMT 2318)

This is an introduction to basic marketing functions; identification of consumer and organizational needs; explanation of economic, psychological, sociological, and global issues; and description and analysis of the importance of marketing research. Prerequisite: Reading level 4. (3:3-0)

MRKG 2312 E-Commerce Marketing (521401)

(Formerly MRKG 2376)

E-Commerce marketing explores the convergence and divergence of traditional marketing principles and strategies with those of electronic marketing. The focus is on marketing communications and developing customer relationships in this dynamic environment. How e-marketers use electronic tools to pursue and evaluate these goals also are considered. Prerequisite: Reading Level 4. (3:3-0)

MRKG 2376 E-Commerce Marketing (521401)

Not offered after Summer 2009.

E-commerce marketing explores the convergence and divergence of traditional marketing principles and strategies with those of marketing on the Internet. This course explores the opportunities, challenges and ethical issues that this dynamic marketing tool brings to the marketing plan. Prerequisites: Reading level 4, Writing level 4. (3:3-0)

Course Descriptions

Business Office Technology

MRMT 1307 Medical Transcription I (510708)

(Formerly *POFM 1331*)

This course teaches the fundamentals of medical transcription with hands-on experience in transcribing physician dictation including, medical histories and note from physicals, discharge summaries, consultants, operative reports, and other medical reports. Students learn to use transcribing and information processing equipment compatible with industry standards. Students work to develop speed and accuracy. Prerequisites: *POFM 1371* and word processing skills. (3:3-1)

POFI 1341 Computer Applications II (520407)

(Formerly *OFAD 2372*)

This study of current computer terminology and technology provides advanced skill development in computer hardware, software applications, and procedures. Prerequisite: *BCIS 1305*, or equivalent. (3:3-1)

POFI 1349 Spreadsheets (520407)

(Formerly *SSOA 2305; OFAD 2305, OFAD 2376*)

Intermediate-level instruction includes in-depth coverage in the use of spreadsheet software focusing on business applications. Topics include worksheet creation and modification, graphics, and use of macro programming database functions. Prerequisite: *BCIS 1305* or introductory computer applications course. (3:3-1)

POFI 2331 Desktop Publishing for the Office (520407)

This course provides in-depth coverage of desktop publishing terminology, text editing, and use of design principles to create publishing material using word processing desktop publishing features. Emphasis on layout techniques, graphics, multiple-page displays, and business applications. Prerequisite: Proficiency in word processing software. (3:3-1)

POFL 1305 Legal Terminology (220301)

(Formerly *OFAD 1371*)

This introduction to legal terminology (including spelling, pronunciation, and definition of legal terms) includes an overview of the areas of law and the legal professions. (3:3-0)

POFL 2301 Legal Document Processing (220301)

(Formerly *OFAD 2373*)

This course provides intermediate-level skill development in the production of legal documents used in the legal and court systems. Prerequisite: High-level keyboarding skills. (3:3-1)

POFM 1327 Medical Insurance (510716)

This survey of medical insurance includes the life cycle of various claim forms, terminology, litigation, patient relations, and ethical issues. (3:3-0)

POFM 1371 Medical Terminology (510716)

Study of word origin and structure through the introduction of prefixes, root words, plurals, abbreviations and symbols; surgical procedures; medical specialties; and diagnostic procedures. Instruction in the practical application of a medical vocabulary system. Topics include structure; recognition; analysis; definitions; spelling; pronunciation; and combination of medical terms from prefixes, suffixes, roots, and combining forms. Prerequisite: Reading level 4; Writing level 4. (3:3-0)

POFT 1127 Introduction to Keyboarding (520408)

(Formerly *BUSI 1171*)

Skill development in keyboarding techniques. Emphasis on the development of acceptable speed and accuracy. Students learn the skill of keyboarding by touch, using superior keyboarding software. (1:1.5-.5)

POFT 1309 Administrative Office Procedures I (520401)

(Formerly *Office Procedures 232, SSOA 2312, OFAD 2312*)

This course focuses on decision making, critical thinking, and the study of current office procedures, including telephone skills, time management, travel and meeting arrangements, mail processing, and other duties and responsibilities in an office environment. Prerequisite: Basic keyboarding skills and *BCIS 1305*, or approval of department chair. (3:3-0)

POFT 1319 Records and Information Management I (520401)

(Formerly *Records Management 134, SSOA 1314, OFAD 1314*)

This introduction to basic records and information management includes the life cycle of a record, manual and electronic records management, and basic filing procedures and rules. (3:3-0)

POFT 1325 Business Math and Machine Applications (520408)

(Formerly *Business Machines 131, GENB 1301, BUSI 1309*)

This course offers skill development in the use of electronic calculators and business mathematical functions. Emphasis on business problem-solving skills using spreadsheet software and/or an electronic calculator/keyboard. (3:3-0)

POFT 1328 Business Presentations (520501)

This course offers the skill development in planning and conducting business presentations including communication and media skills.

(3:3-1)

POFT 1329 Keyboarding and Document Formatting (520408)

(Formerly *Typewriting 131, SSOA 1311, OFAD 1311*)

This course offers skill development of touch typing and proper keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels, and formatting basic documents. (3:3-1)

POFT 2301 Document Formatting and Skill Building (520408)

(Formerly *Typewriting 132, SSOA 1312, OFAD 1312*)

This course offers further development of keyboarding skills in document formatting, speed, and accuracy. Emphasis on proofreading, editing, following instructions, and keying documents from various types of copy. Prerequisite: *POFT 1329* or keyboarding proficiency. (3:3-1)

POFT 2364 Practicum (520401)

(Formerly *OFAD 2375*)

This course offers practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and student (3:0-21)

Chemistry

CHEM 1405 Introductory Chemistry I

Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for non-science and allied health students. An introduction to the fundamentals and principles of chemistry for students with no previous background in chemistry. Topics include the metric system, atomic structure, periodic table, ionic and covalent bonding, chemical equations, solutions, and emphasis on practical applications of

chemistry. Satisfies the lab science requirement for liberal arts and non-science majors and the chemistry requirement for some allied health majors. Does not substitute for CHEM 1411. Core credit will not be given for both CHEM 1405 and CHEM 1411. CHEM 1412 can only be taken if preceded by CHEM 1411. Prerequisites: Reading level 6, Writing level 6, Math level 6 (4:3-3)

CHEM 1407 Introductory Chemistry II

Survey introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for non-science and allied health students. Second semester of introductory chemistry. An introduction to the language and basic concepts of organic chemistry and biochemistry. Topics include molecular structure, stereochemistry, organic nomenclature, and chemistry of biologically important functional groups. Does not substitute for CHEM 1412. Prerequisites: CHEM 1405 or CHEM 1411, Reading level 6, Writing level 6, Math level 6. (4:3-3)

CHEM 1411 General Chemistry I (4005015203)

(Formerly Chemistry 141)

The first semester of two college level courses in general inorganic chemistry, this course includes measurements, atomic and molecular structure, periodic classification of elements, chemical nomenclature, empirical and molecular formulas, equation writing, stoichiometry, and gas laws. Prerequisites: Reading level 6 and Math level 7. (4:3-3)

CHEM 1412 General Chemistry II (4005015203)

(Formerly Chemistry 142)

This second semester of general inorganic chemistry includes a study of liquids, solids, solutions, acids, bases, ionic equations, oxidation/reduction equations, reaction rates, chemical equilibria, and thermochemistry. Prerequisites: CHEM 1411 and Reading level 7. (4:3-3)

CHEM 2423 Organic Chemistry I (4005045203)

(Formerly Chemistry 243, 2413)

This introductory organic chemistry course includes the study of covalent bonding, isomerism, nomenclature, stereochemistry, alkyl halides, substitution and elimination reactions, free radical reactions, alkanes, alcohols, ethers, and spectroscopy. Prerequisite: CHEM 1412. (4:3-3)

CHEM 2425 Organic Chemistry II (4005045203)

(Formerly Chemistry 244, 2414)

This second semester of introductory organic chemistry includes the study of alkenes, alkynes, aromatic compounds, aldehydes, ketones, carboxylic acids and their derivatives, polycyclic and heterocyclic compounds, carbohydrates, amino acids, and proteins. Prerequisite: CHEM 2423. (4:3-3)

Child Development/ Early Childhood Education

CDEC 1303 Family, School and Community (131210)

(Formerly CHID 1315)

This course focuses on the study of the child, family, community, and schools. Includes parent education and involvement, family and community lifestyles, child abuse, and current family life issues. Course content is aligned with State Board of Educator Certification Pedagogy and Professional Responsibilities standards. Requires students to participate in a minimum of 16 hours field experience with children from infancy through age 12 in a variety of settings with varied and diverse populations. (NOTE: Credit will not be given for both CDEC 1303 and TECA 1303.) (3:3-1)

CDEC 1311 Educating Young Children (131210)

This introduction to the education of the young child focuses on developmentally appropriate practices and programs, theoretical and historical perspectives, ethical and professional responsibilities, and current issues. The course content is aligned with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. The course requires students to participate in a minimum of 16 hours of field experience with children from infancy through age 12 in a variety of settings with varied and diverse populations. (Note: Credit will not be given for both CDEC 1311 and TECA 1311.) (3:3-1)

CDEC 1318 Wellness of the Young Child (131210)

(Formerly CHID 2318)

This course focuses on factors impacting the well-being of young children, including healthy behavior, food, nutrition, fitness, and safety practices. The course focuses on local and national standards and legal implications of relevant policies and regulations. Course content is aligned with State Board of Educator Certification Pedagogy and Professional Responsibilities standards. The course requires students to participate in a minimum of 16 hours field experience with children from infancy through age 12 in a variety of settings with varied and diverse populations. (NOTE: Credit will not be given for both CDEC 1318 and TECA 1318.) (3:3-1)

CDEC 1319 Child Guidance (190709)

(Formerly CHID 1313)

This is an exploration of guidance strategies for promoting prosocial behaviors with individuals and groups of children. Emphasis on positive principles and techniques, family involvement and cultural influences. There is practical application through direct participation with children. (3:3-1.5)

CDEC 1321 The Infant and Toddler (190709)

(Formerly CHID 2313)

This study of appropriate infant and toddler programs (birth to age 3) includes an overview of development, quality routines, appropriate environments, materials and activities, and teaching/guidance techniques. (3:3-0)

CDEC 1323 Observation and Assessment (190709)

This course teaches students observation skills, assessment techniques, and documentation of children's development. (3:3-1.5)

CDEC 1354 Child Growth and Development (131210)

(Formerly CHID 1311)

This course focuses on the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence. (Note: Credit will not be given for both CDEC 1354 and TECA 1354.) (3:3-0)

CDEC 1356 Emergent Literacy for Early Childhood (190706)

(Formerly CHID 1314)

This is an exploration of principles, methods, and materials for teaching young children language and literacy through a play-based, integrated curriculum. (3:3-0)

Course Descriptions

CDEC 1359 Children With Special Needs (190709)

(Formerly CHID 2312)

This is a survey of information regarding children with special needs, including possible causes and characteristics of exceptionalities, intervention strategies, available resources, referral processes, the role of advocacy, and legislative issues. (3:3-0)

CDEC 1413 Curriculum Resources for Early Childhood Programs (190709)

This is a study of the fundamentals of curriculum design and implementation in developmentally appropriate programs for children. (4:3-3)

CDEC 1417 Child Development Associate Training I (190709)

(Formerly CHID 2611, CDEC 1517)

This course is based on the requirements for the Child Development Associate (CDA) National Credential. Topics on CDA overview, general observation skills, and child growth and development overview. The four functional areas covered include creative, cognitive, physical, and communication. (4:3-4)

CDEC 1458 Creative Arts for Early Childhood (190709)

(Formerly CHID 1412)

This is an exploration of principles, methods, and materials for teaching children music, movement, visual arts, and dramatic play through process-oriented experiences to support divergent thinking. (4:3-3)

CDEC 2164 Practicum in Child Development (190706)

(Not offered after Summer 2009)

This course offers practical, general workplace training supported by an individualized learning plan developed by the employer, College, and student. The plan relates to the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. The course may be repeated if topics and learning outcomes vary. Co-requisite: CDEC 1417. (1:0-7)

CDEC 2165 Practicum in Child Development (190706)

(Not offered after Summer 2009)

This course offers practical, general workplace supported by an individualized learning plan developed by the employer, College, and student. The plan relates to the workplace training and experiences to the student's general and technical

course of study. The guided external experiences may be for pay or no pay. The course may be repeated if topics and learning outcomes vary. Co-requisite: CDEC 2422. (1:0-7)

CDEC 2304 Child Abuse and Neglect (190709)

(Not offered after Summer 2009)

This course focuses on methods used in the identification of physical, emotional, and sexual abuse and neglect, with an emphasis on developing skills for working with children and families. It includes methods of referral to public and private agencies that deal with investigation and treatment. (3:3-0)

CDEC 2315 Diverse Cultural/Multilingual Education (190709)

(Formerly CHID 1318, FMLD 1351)

This overview of multicultural education includes relationship with the family and community to develop awareness and sensitivity to diversity related to individual needs of children (3:3-0)

CDEC 2326 Administration of Programs for Children I (190708)

(Formerly CHID 2314)

This course teaches application of management procedures for early childcare and education programs. It includes planning, operating, supervising, and evaluating programs. Topics covered include, philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation, and communication. (3:3-0)

CDEC 2328 Administration of Programs for Children II (190708)

(Formerly CHID 2316)

This in-depth study of skills and techniques for managing early care and education programs, including legal, ethical issues, personnel management, team building, leadership, conflict resolution, stress management, advocacy, professionalism, fiscal analysis, planning parent education/partnerships, and technical applications in programs. (3:3-0)

CDEC 2336 Administration of Programs for Children III (190708)

This is an advanced study of the skills and techniques in managing early childcare education programs. Co-requisite: CDEC 2366. Prerequisite: Six hours of child development courses to include CDEC 2326 and CDEC 2328 or department chair approval. (3:3-0)

CDEC 2341 The School Age Child (190709)

(Formerly CHID 2310)

This study of the appropriate programs for the school-age child (5-13 years), includes an overview of development, appropriate environments, materials, activities, and teaching/guidance techniques. (3:3-0)

CDEC 2366 Practicum (or Field Experience)-Child Care Provider/Assistant (190709)

(Formerly CHID 2315, CDEC 2266)

This course provides practical general workplace training supported by an individualized learning plan developed by the employer, the College, and student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. The course may be repeated if topics and learning outcomes vary. Prerequisite: or co-requisite: CDEC 1319. (3:0-21)

CDEC 2407 Math and Science for Early Childhood (190709)

This course provides an exploration of principles, methods, and materials for teaching children math and science concepts and process skills through discovery and play. (4:3-3)

CDEC 2422 Child Development Associate Training II (190709)

This course is a continuation of the requirements for the Child Development Associate National Credential (CDA). The six functional areas of study include safety, health, learning environment, self, social, and guidance. (4:3-4)

CDEC 2424 Child Development Associate Training III (190709)

This course is a continuation of the requirements for Child Development Associate National Credential (CDA). Three of the 13 functional areas of study include family, program management and professionalism (4:3-4)

FMLD 1353 Marriage and Family Issues (190704)

(Formerly CHID 2311)

This exploration of the relationships between family values, structures, and types, examines the functions of the family and the appropriate roles for caregivers. (3:3-0)

Course Descriptions

FMLD 1372 Dynamics of Human Relationships (420402)

(Formerly HOEC 1371)

This study of the fundamentals of human relationships, communication, and problem-solving skills explores the factors of self-concept, emotions, perceptions, defense mechanisms, and conflict resolution styles, as they pertain to the dynamics of human relationships within the family and workplace. (3:3-0)

TECA 1303 Family, School and Community (1301015209)

(Formerly CHID 1315)

This study of the child, family, community, and schools, includes parent education and involvement, family and community lifestyles, child abuse, and current family life issues. The course content is aligned with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. The course requires students to participate in a minimum of 16 hours of field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations. (Note: Credit will not be given for both CDEC 1303 and TECA 1303.) (3:3-1)

TECA 1311 Educating Young Children (1312025109)

This introduction to the education of the young child, includes developmentally appropriate practices and programs, theoretical and historical perspectives, ethical and professional responsibilities, and current issues. The course content is aligned with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. It requires students to participate in a minimum of 16 hours of field experience with children from infancy through age 12 in a variety of settings with varied and diverse populations. (Note: Credit will not be given for both CDEC 1311 and TECA 1311.) (3:3-1)

TECA 1318 Wellness of the Young Child (1301015309)

This is a study of the factors impacting the well-being of young children, including healthy behavior, food, nutrition, fitness, and safety practices. The course focuses on local and national standards and legal implications of relevant policies and regulations. The course content is aligned with State Board of Educator Certification Pedagogy and Professional Responsibilities standards. It requires students to participate in a minimum of 16 hours of field experience with children from infancy through age 12 in a variety of settings with varied and diverse populations. (Note: Credit will not be given for both CDEC 1318 and TECA 1318.) (3:3-1)

TECA 1354 Child Growth and Development (1312025209)

This is a study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence. (Note: Credit will not be given for both TECA 1354 and CDEC 1354.) (3:3-0)

Communications

COMM 1129 Newspaper Laboratory (0904015426)

(Formerly Journalism 111-112, 1111)

This course offers first-year participation on a weekly newspaper and it is required for COMM 2311 and 2315 students. Any student may register for the laboratory portion only, with consent of the department chair. The course may be taken a maximum of two times for credit. Prerequisites: Reading level 6 and Writing level 6. (1:0-3)

COMM 1307 Mass Communications (0901025106)

(Formerly Journalism 132, 1312)

This freshman course in the development of the mass media in America emphasizes newspapers, magazines, radio, and television, with a brief study of the historical development of the mass media and the social, economic, and cultural responsibilities of the mass media. Prerequisite: Reading level 7. (3:3-0)

COMM 1318 Beginning Photography (5006055126)

(Formerly Journalism 131, 1311)

This is a beginning course in the taking, developing and printing of photographs. Students receive instruction in photographic principles and are given assignments to complete in the laboratory period or outside class. Darkroom facilities and a limited number of cameras are furnished by the College. Students will not receive credit for both ARTS 2356 and COMM 1318. (3:1-5)

COMM 1319 Intermediate Photography (5006055226)

(Formerly Journalism 133, 1313)

This course offers further development of techniques, with emphasis on content and composition of photographs, including experience in a variety of professional and technical areas. Students will not receive credit for both ARTS 2357 and COMM 1319. Prerequisite: COMM 1318 or ARTS 2356 or approval of department or division chair. (3:1-5)

COMM 2129 Newspaper Laboratory (0904015406)

(Formerly Journalism 211, 212, 2111)

This course offers second-year participation on a weekly newspaper, and it may be taken a maximum of two times for credit. Prerequisites: Reading level 6 and Writing level 6. (1:0-3)

COMM 2309 Editing I (0904015306)

(Formerly Journalism 233, 2313)

This course covers the fundamentals of copy editing for newspapers, including copy reading, headline writing, and makeup. It includes studies in news value, story organization, clarity of writing and style, and typography as related to make-up. Prerequisites: COMM 2311 or consent of department chair, Reading level 7, and Writing level 7. (3:2-3)

COMM 2311 Reporting I (0904015706)

(Formerly Journalism 231, 2311)

This course features instruction and practice in interviewing and writing, and discussion of news sources, news values, and types of news stories. Concurrent registration for a newspaper laboratory is required. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

COMM 2315 Reporting II (0904015806)

(Formerly Journalism 232, 2312)

This course focuses on specialized fields of reporting, including feature writing, governmental and political reporting, courtroom reporting, radio and television, and analytical writing. The class works on special features and analytical projects. Concurrent registration for a newspaper laboratory is required. Prerequisites: COMM 2311, Reading level 7, and Writing level 7. (3:3-0)

COMM 2327 Principles of Advertising (0909035106)

(Formerly Journalism 235, 2315)

This course covers the fundamentals of advertising, with special attention to advertising techniques for the mass media; copy preparation; headlines; and use of art work and layout theories for newspaper and magazine advertising, direct mail, radio, television, outdoor, and other types of advertising. Prerequisite: Reading level 7. (3:3-0)

Course Descriptions

The San Jacinto College Newspaper

All aspects of newspaper production are considered in the publication of the College weekly newspaper: reporting, feature writing, editing, headline writing, photography, advertising, layout and design. Students do all production work necessary for a newspaper except the press operation. The paper is a member of the Texas Community College Journalism Association, the Texas Intercollegiate Press Association, and the Associated Collegiate Press. Registration in COMM 1129 or COMM 2129 is necessary for newspaper participation.

Computer Information Systems

(See Information Technology)

Computer Science

COSC 1336 Programming Fundamentals I

(1102015507)

This course introduces the fundamental concepts of structured programming. The topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy. Prerequisite: or co-requisite: MATH 1314 and Prerequisite: Reading level 7. (3:3-0)

COSC 1337 Programming Fundamentals II (1102015607)

This course is a review of control structures and data types places. The emphasis is on structured data types. The students apply the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. Prerequisite: COSC 1336. (3:3-0).

COSC 2325 Digital Computer Architecture and Programming (1102015407)

This course focuses on basic computer organization, machine cycle, digital representation of data and instructions, assembly language programming, and assembler, loader, macros, subroutines, and program linkages. Prerequisite: COSC 1336. (3:3-0)

COSC 2336 Programming Fundamentals III (1102015707)

This course explores further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. The topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis. Prerequisite: COSC 1337. (3:3-0).

Construction Technology

Non-Credit Continuing Education Courses I

CNBT 1016 Construction Technology

(Continuing Education Course)

This is a comprehensive course in site preparation, foundation, form work, and framing. Topics include safety; tools and equipment; basic site preparation; basic foundations and form work; and basic floor, wall and framing methods and systems. (128 contact hours)

CNBT 1050 Construction Technology II

(Continuing Education Course)

This is an intermediate course in site preparation, foundation, form work, and framing in residential and light construction. Topics include safety; tools and equipment; site preparation and layout; concrete; foundations and related form work; and floor, wall, ceiling, and roof framing methods and systems. (128 contact hours)

CNBT 1053 Construction Technology III

(Continuing Education Course)

This is an intermediate course in foundation and form work, exterior trim and finish, and interior finish for residential and commercial construction. Topics include safety; tools and equipment; concrete; foundations and related form work; exterior building finish; and interior floor, wall, and ceiling finish. (128 contact hours)

CNBT 2039 Construction Technology IV

(Continuing Education Course)

This is an advanced course in site preparation, framing, and interior finish for residential, light, and commercial construction. Topics include safety, tools and equipment, finish site work and equipment, alternate framing systems and methods, interior doors and windows, walls, and floors. (128 contact hours)

Cosmetology

CSME 1302 Applications of Facials/Esthetics Technology I (120409)

(Formerly CSME 1371)

This course is an introduction to the application of facial/esthetic technology. Includes identifying and utilizing professional skin care products. Pre-requisites and co-requisites: Reading level 4, and concurrent enrollment in CSME 1421 and CSME 1520 or department chair approval. Students may not receive credit for CSME 1302 if they have previously earned credit for CSME 1371 OR CSME 1271. 80 contact hours per term (3:2-3)

CSME 1310 Introduction to Haircutting and Related Theory (120407)

(Formerly COSM 1421, COSM 1511)

This is an introduction to the theory and practice of hair cutting. Topics include terminology, implements, sectioning and finishing techniques. Prerequisites and co-requisites: Reading level 4, CSME 1501, CSME 1354, and courses taken in level sequence order or department chair approval. 112 contact hours per semester. Students may not receive credit for CSME 1310 if they have previously earned credit for COSM 1421 or COSM 1511. (3:1-6)

CSME 1330 Orientation to Nail Technology (120410)

(Formerly COSM 1424, COSM 1504)

This is an overview of the fundamental skills and knowledge necessary for the field of nail technology. Topics include bacteriology, sanitation, safety, orientation, preparation, and professional practices. Emphasis will be directed toward Texas Department of Licensing and Regulation, department and campus rules and regulations, hand and arm massage, and basic manicure procedures. Prerequisite: and co-requisite: Reading level 4 and courses taken in level sequence order or department chair approval. 144 contact hours per semester. (3:1-8)

CSME 1354 Artistry of Hair Design I (120407)

This course is an introduction to hair design. Topics include the theory and applications of wet styling, braiding, thermal hair styling, finishing techniques, and client communications. Prerequisites: Reading level 4 and courses taken in level sequence order or department chair approval. 112 contact hours per semester. (3:1-6)

CSME 1355 Artistry of Hair Design II (120407)

(Formerly COSM 1232, COSM 1332, CSME 1251)

This is a continuation of the study of hair design. Topics include additional theory and applications of current trends in hair design. Additional topics include salon operations and wigology. Prerequisite and co-requisites: Reading level 4, CSME 1501, CSME 1354, and courses taken in level sequence order or department chair approval. 112 contact hours per semester. Students may not receive credit for CSME 1355 if they have previously earned credit for COSM 123, COSM 1332 or CSME 1251. (3:1-6)

CSME 1371 Applications of Facial/Esthetics Technology I (120409)

(Not offered after Summer 2008)

This lecture and laboratory based learning experience enables students to apply specialized occupational theory, skills and concepts. Prerequisites and co-requisites: Reading level 4, CSME 1421 and CSME 1520 or department chair approval. 80 contact hours per term. (3:2-3)

CSME 1372 Applications of Facial/Esthetics Technology II (120409)

(Not offered after Summer 2008)

This course is a continuation of the concepts and principles of skin care and other related technologies. Prerequisites and co-requisites: Reading level 4 and concurrent enrollment in CSME 1545 and CSME 2431 or department chair approval. 80 contact hours per term. Student may not receive credit for CSME 1372 if they have previously earned credit in CSME 1272. (3:2-3)

CSME 1421 Principles of Facial/Esthetic Technology I (120409)

(Formerly COSM 2421, COSM 2711)

This is an introduction to the principles of facial/esthetic technology. Topics include anatomy, physiology, theory, and related skills of facial/esthetic technology. Prerequisites and co-requisite: Reading level 4 and concurrent enrollment in CSME 1520 and CSME 1371 or department chair approval. 128 contact hours per semester. (4:2-6)

CSME 1435 Orientation to the Instruction of Cosmetology (120413)

(Formerly COSM 2331, COSM 2611)

This is an overview of the skills and knowledge necessary for the instruction of cosmetology students. The course introduces the student to methods and techniques of teaching skills, including orientation, the theory of teaching basic unit planning, and daily skill lesson plan

development. Prerequisites: Reading level 6, Math level 4, and Writing level 6, valid Texas Department of Licensing and Regulation operator license, high school diploma or GED. Co-requisite: CSME 1534 or department chair approval. 112 contact hours per semester. (4:2-5)

CSME 1457 Applications of Hair Weaving & Braiding (120407)

(Formerly COSM 2202, CSME 1473, CSME 1474)

This course emphasizes the application of hair weaving and braiding techniques and preparation for the Texas Department of Licensing and Regulation (TDLR) examination. Prerequisites and co-requisites: Reading level 4 and concurrent enrollment with CSME 1552. 160 contact hours per semester. Students may not receive credit for CSME 1457 if they have previously earned credit in CSME 1473 or CSME 1474. (4:2-8)

CSME 1501 Orientation to Cosmetology (120401)

This is an overview of the skills and knowledge necessary for the field of cosmetology. Topics include the theory and/or skills related to braiding, facials, manicuring, pedicuring, anatomy, physiology, electricity, light therapy, bacteriology, contamination and infection control. Prerequisites: Reading level 4 and courses taken in level sequence order or department chair approval. (Note: Students may not receive credit for CSME 1501 if they have previously earned credit for COSM 1451 or COSM 1521.) 176 contact hours per semester. (5:3-8)

CSME 1505 Fundamentals of Cosmetology (120401)

This course focuses on the basic fundamentals of cosmetology for high school and dual credit students. Topics include service preparation, manicure, facial, chemical services, shampoo, haircut, wet styling, and comb out. The course will identify fundamental concepts related to skills required by the Texas Department of Licensing and Regulation. Prerequisites and co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 112 contact hours per semester. (5:3-4)

CSME 1520 Orientation to Facial Specialist (120408)

(Formerly COSM 2521)

This is an overview of the skills and knowledge necessary for the field of facials and skin care. Prerequisite and co-requisite: CSME 1421 Reading level 4 and concurrent enrollment in CSME 1421 and CSME 1371 or department chair approval. 176 contact hours per semester. (5:3-8)

CSME 1531 Principles of Nail Technology I (120410)

(Formerly COSM 1404, COSM 1402)

This is a course in the principles of nail technology. Topics include anatomy, physiology, theory, and related skills of nail technology. Additional topics include the theory and techniques of basic pedicure, oil manicure, buffing, nail repair, and removal of stains. Emphasis will be directed toward major structures and functions of the bones, muscles and nerves of the hands and arms and feet and lower leg. Other topics include sanitation and safety measures. Prerequisites and co-requisite: Reading level 4, CSME 1330 and courses taken in level sequence order or department chair approval. 176 contact hours per semester. Students may not receive credit for CSME 1531 if they have previously earned credit for COSM 1404 or COSM 1402. (5:3-8)

CSME 1534 Cosmetology Instructor I (120413)

(Formerly COSM 2432)

In covering the fundamentals of instruction of cosmetology students, this course introduces the student to the application of methods and techniques of teaching skills in a lab situation. Prerequisites and co-requisites: Reading level 6, Math level 4, Writing level 6, and CSME 1435 or department chair approval. 144 contact hours per semester. (5:3-6)

CSME 1541 Principles of Nail Technology II (120410)

(Formerly COSM 1324)

In this course, students continue their study of the concepts and principles of nail technology. Topics include advanced instruction in anatomy, physiology, theory, and related skills of nail technology. Emphasis will be directed toward application of artificial nails, including the study of the equipment, implements, and supplies for application of cosmetic fingernails. Other topics include sanitation, safety measures, hazardous chemicals, and MSDS information data. Prerequisites and co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 176 contact hours per semester. Students may not receive credit for CSME 1541 if they have previously earned credit for COSM 1324. (5:3-8)

Course Descriptions

CSME 1545 Principles of Facial/ Esthetic Technology II (120409)

(Formerly COSM 2522)

This course is a continuation of the study of concepts and principles in skin care and other related technologies. Topics include the study of advanced instruction in anatomy, physiology, theory and related skills of facial and esthetic technology. Prerequisites and co-requisites: Reading level 4 and concurrent enrollment in CSME 2431 and CSME 1372 or department chair approval. 176 contact hours per semester. (5:3-8)

CSME 1547 Principles of Skin Care/Facials and Related Theory (120409)

(Formerly COSM 1422, COSM 1314)
(Not offered after Summer 2008)

This course provides in-depth coverage of the theory and practice of skin care, facials, and cosmetics. Topics of study include facial cleansing; manipulations; toning; moisturizing; application of packs and masks; daytime, evening and corrective makeup; cosmetic chemistry; and superfluous hair removal techniques. Prerequisite and co-requisite: Reading level 4 and courses taken in level sequence order or department chair approval. 176 contact hours per semester. Students may not receive credit for CSME 1547 if they have previously earned credit for COSM 1422 or COSM 1314. (5:3-8)

CSME 1552 Orientation to Hair Weaving and Braiding (120403)

(Formerly COSM 2401, CSME 1471, CSME 1472)

This is an overview of the skills and knowledge necessary for the field of hair weaving and braiding. Prerequisites and co-requisites: Reading level 4 and concurrent enrollment with CSME 1457. 160 contact hours per semester. Students may not receive credit for CSME 1552 if they have previously earned credit for CSME 1471 or CSME 1472. (5:3-7)

CSME 1553 Chemical Reformation and Related Theory (120407)

This course features presentation of the theory and practice of chemical reformation, including terminology, application, and workplace competencies. Emphasis on history, chemistry, hair structure, chemical texturizing techniques, service preparation, brush and scalp techniques/analysis, shampooing and conditioning. Prerequisites: Reading level 4 and courses taken in level sequence order or department chair approval. (Note: Students may not receive credit for CSME 1553 if they have previously earned credit for COSM 1321 or COSM 1312.) 176 contact hours per semester. (5:3-8)

CSME 2244 Preparation for the State Licensing Written Examination (120412)

This course prepares the student for the state licensing written examination. The emphasis will be directed towards the preparation for the state written exam, the refinement of professional skills to serve clients and the development of business practices for successful entry into the industry. Prerequisite: Reading level 4, CSME 1501, CSME 1553, CSME 1310, CSME 1354. Co-requisites: CSME 2501, CSME 1355, CSME 2310, CSME 2343, and courses taken in level sequence order or department chair approval. 80 contact hours per semester. (2:1-4)

CSME 2310 Advanced Haircutting and Related Theory (120407)

(Formerly COSM 1342, COSM 1303)

This course focuses on advanced concepts and practice of haircutting. Topics include haircutting utilizing scissors, razors, and/or clippers. Emphasis will be directed towards men's haircutting techniques, women's haircutting techniques, and client services in the salon. Prerequisites and co-requisites: Reading level 4, CSME 1310 and courses taken in level sequence order or department chair approval. 112 contact hours per semester. Students may not receive credit for CSME 2310 if they have previously earned credit for COSM 1342 or COSM 1303. (3:1-6)

CSME 2333 Applications of Facials/Esthetics Technology II (120409)

(Formerly CSME 1372)

This course is a continuation of the application of facial/esthetics technology I. Emphasizes preparation for the Texas Department of Licensing and Regulation Facial Exam. Prerequisites and co-requisites: Reading level 4 and concurrent enrollment is CSME 1545 and CSME 2431 or department chair approval. Students may not receive credit for CSME 2333 if they have previously earned credit for CSME 1372 or CSME 1272. 80 contact hours per term (3:2-3)

CSME 2337 Advanced Cosmetology Techniques (120401)

This course focuses on the mastery of advanced cosmetology techniques including hair designs, professional cosmetology services, and workplace competencies. Additional topics include the creation of an employment portfolio. Prerequisites and co-requisites: Reading level 4 and department chair approval. 80 contact hours per semester. (3:1-4)

CSME 2343 Salon Development (120412)

This course focuses on the applications of procedures necessary for salon development. Topics include professional ethics and goals, salon operation, record keeping and the creation of an employment portfolio. Prerequisite: Reading level 4 and courses taken in level sequence order or department chair approval. 96 contact hours (3:2-4).

CSME 2414 Cosmetology Instructor II (130301)

(Formerly COSM 2333, COSM 2612)

This continuation of the fundamentals of instruction of cosmetology students introduces methods and techniques of teaching informational theory relative to cosmetology. Prerequisites: Reading level 6, Math level 4, Writing level 6, CSME 1435 and CSME 1534. Co-requisites: CSME 2515 or department chair approval. 112 contact hours per semester. (4:2-5)

CSME 2430 Nail Enhancement (120410)

(Formerly COSM 1234, COSM 1334)

This is a course in the theory, application, and related technology of artificial nails. Topics include the theory of the skin and nail structure, functions, condition, lesions, growth, irregularities, and diseases. Emphasis will be directed toward applications of nail extensions, to include sculpture nails, tips, wraps, fiberglass, gels, odorless products, and nail art. Simulated work experience provides the opportunity for the students to further develop learned skills in the area of safety, human relations, employment relations, salesmanship, and public relations. Prerequisites and co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 112 contact hours per semester. Student may not receive credit for CSME 2430 if they have previously earned credit for COSM 1234 or COSM 1334. (4:3-4)

CSME 2431 Principles of Facial/ Esthetic Technology III (120409)

(Formerly COSM 2422, COSM 2712)

This course focuses on advanced concepts and principles of skin care and other related technologies. Prerequisites and co-requisites: CSME 1545 Reading level 4 and concurrent enrollment in CSME 1545 and CSME 1372 or department chair approval. 128 contact hours per semester. (4:2-6)

CSME 2445 Instructional Theory and Clinic Operation (120413)

(Formerly COSM 2335, COSM 2613)

This course is an overview of the objectives required by the Texas Department of Licensing and Regulation Instructor Examination. It provides employment-seeking skills and instructs students in the preparation of résumés and interviewing techniques. Prerequisites: Reading level 6, Math level 4, Writing level 6, CSME 2414 and CSME 2515. Co-requisite: CSME 2544 or department chair approval. 112 contact hours per semester. (4:2-5)

CSME 2501 Principles of Hair Coloring and Related Theory (120407)

(Formerly COSM 1322, COSM 1313)

This course presents the theory, practice and chemistry of hair color. Topics include terminology, application, and workplace competencies related to hair color and chemistry. Emphasis will be directed towards hair lightening and temporary, semi-permanent, demi-permanent, and permanent hair coloring using current applications, formulations, and mixing techniques. Prerequisites and co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 176 contact hours per semester. Students may not receive credit for CSME 2501 if they have previously earned credit for COSM 1322 or COSM 1313. (5:3-8)

CSME 2515 Cosmetology Instructor III (120413)

(Formerly COSM 2434)

A presentation of lesson plan assignments and evaluation techniques, this course introduces the students to the responsibility of assessing cosmetology techniques. Prerequisites: Reading level 6, Math level 4, Writing level 6, CSME 1435 and CSME 1534. Co-requisites: CSME 2414 or department chair approval. 144 contact hours per semester. (5:3-6)

CSME 2539 Advanced Hair Design (120407)

(Formerly COSM 2313, COSM 2423)

This course promotes advanced concepts in the theory and practice of hair design. Topics include the master of advanced cosmetology techniques, professional cosmetology services, and workplace competencies. Emphasis will be directed toward client services in a simulated salon. Prerequisites and co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 176 contact hours per semester. (5:3-8)

CSME 2541 Preparation for the State Licensing Examination (120401)

This course is a preparation for the state licensing examination which emphasizes the study of theory and skill procedures, the refinement of professional skills to serve clients, and the development of business practices for successful entry into the industry. Prerequisites and co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. (5:3-8)

CSME 2544 Cosmetology Instructor IV (120413)

(Formerly COSM 2436)

This course focuses on advanced concepts of instruction in a cosmetology program. Topics include demonstration, development and implementation of advanced evaluation and assessment techniques. Prerequisites: Reading level 6, Math level 4, Writing level 6, CSME 2414 and CSME 2515. Co-requisites: CSME 2544 or department chair approval. 144 contact hours per semester. (5:3-6)

(See Massage Therapy for program courses)

Criminal Justice

Academic Transfer Courses

CRIJ 1301 Introduction to Criminal Justice (4301045124)

(Formerly Criminal Justice 131, Law Enforcement 131, CRIJ 1311)

This course introduces the history and philosophy of criminal justice and ethical considerations, as well as definitions of crime and its nature and impact, an overview of the criminal justice system, law enforcement, the court system, prosecution and defense, the trial process, and corrections. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 1301 and CJSA 1322.) (3:3-0)

CRIJ 1306 Court Systems and Practices (2201015424)

(Formerly CRIJ 2306)

This course is an examination of the role of the judiciary in the criminal justice system. Topics include the structure of the American court system, prosecution, right to counsel, pretrial release, the grand jury process, the adjudication process, types and rules of evidence, and sentencing concepts. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 1306 and CJSA 1313.) (3:3-0)

CRIJ 1307 Crime in America (4504015225)

(Formerly CRIJ 1320)

This is a study of crime problems in historical perspective with consideration of social and public policy factors affecting crime, its impact and trends; social characteristics of specific crimes; and crime prevention. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 1307 and CJSA 1312.) (3:3-0)

CRIJ 1310 Fundamentals of Criminal Law (2201015324)

(Formerly Criminal Justice 231, Law Enforcement 231, Legal Aspects, CRIJ 2311)

This course is a study of the nature of criminal law. Topics include philosophical and historical development, major definitions and concepts, classification of crime, elements of crimes and penalties, and individual criminal responsibilities. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 1310 and CJSA 1327.) (3:3-0)

CRIJ 1313 Juvenile Justice System (4301045224)

(Formerly CRIJ 2322)

This is a study of the juvenile justice process. Topics include specialized juvenile law, the role of the juvenile law, the role of the juvenile courts, the role of police agencies, the role of correctional agencies, and theories concerning delinquency. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 1313 and CJSA 1317.) (3:3-0)

CRIJ 2301 Community Resources in Corrections (4301045324)

This is an overview of diversionary practices and treatment programs available to offenders in a local context. Topics include selected recognized models and future trends in community treatment. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 2301 and CJCR 2324.) (3:3-0)

CRIJ 2313 Correctional Systems and Practices (4301045424)

(Formerly CRIJ 2325)

This course focuses on corrections in the criminal justice system, organization of correctional systems, correctional role, institutional operations, alternatives to institutionalization, treatment and rehabilitation, and current and future issues. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 2313 and CJCR 1307.) (3:3-0)

Course Descriptions

CRIJ 2314 Criminal Investigation (4301045524)

(Formerly Criminal Justice 134, Law Enforcement 134, CRIJ 1314)

This is a study of investigative theory, including the collection and preservation of evidence, sources of information, concepts of interviewing and interrogation, the use of forensic sciences, and trial preparation. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 2314 and CJSA 1342.) (3:3-0)

CRIJ 2323 Legal Aspects of Law Enforcement (4301045624)

(Formerly CRIJ 2319)

This is a study of police authority, responsibilities, constitutional constraints, laws of arrest, search and seizure, and police civil liability. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 2323 and CJSA 2300.) (3:3-0)

CRIJ 2328 Police Systems and Practices (4301045724)

(Formerly CRIJ 2320)

This course explores the profession of the police officer. Topics include organization of law enforcement systems, the police role, police discretion, ethics, police/community interaction, and current and future issues. Prerequisite: Reading level 4. (Note: Credit will not be given for both CRIJ 2328 and CJSA 1359.) (3:3-0)

Technical Courses

CJCR, CJLE, and CJSA courses are not intended for transfer to a university criminal justice degree plan.

CJCR 1304 Probation and Parole (430102)

(Formerly CRIJ 1321)

This is a survey of the structure, organization, and operation of probation and parole services. Emphasis on applicable state statutes and administrative guidelines. Prerequisite: Reading level 4. (3:3-0)

CJCR 1307 Correctional Systems and Practices (430102)

(Formerly CRIJ 2325)

This is a study of the role of corrections in the criminal justice system. Topics include organization and theory of correctional systems, institutional operations, management, alternatives to institutionalization, treatments and rehabilitation, and current and future issues. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJCR 1307 and CRIJ 2313.) (3:3-0)

CJCR 2324 Community Resources in Corrections (430102)

This course provides an overview of diversionary practices and treatment programs available to offenders in a local context. Topics include selected recognized models and future trends in community treatment. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJCR 2324 and CRIJ 2301.) (3:3-0)

CJCR 2325 Legal Aspects of Corrections (430102)

(Formerly CRIJ 2332)

This course is a study of the operation, management, and legal issues affecting corrections, including analysis of constitutional issues involving rights of the convicted, as well as civil liability of correctional agencies and staff. Prerequisite: Reading level 4. (3:3-0)

CJLE 1327 Interviewing and Report Writing for Criminal Justice Professions (430107)

This course provides instruction and skill development in interviewing, note-taking, and report writing in the criminal justice context. Students develop of skills in properly conducting investigations and interviews of witnesses, victims, and suspects, including the organization of information regarding incidents into effective written reports. Prerequisite: Reading level 4 (3:3-0)

CJLE 1333 Traffic Law and Investigation (430107)

(Formerly CRIJ 1322)

This course provides instruction in the basic principles of traffic control, traffic law enforcement, court procedures, and traffic law. Emphasis on the need for a professional approach in dealing with traffic law violators and on the police role in accident investigation and traffic supervision. Prerequisite: Reading level 4. (3:3-0)

CJLE 2420 Texas Peace Officer Procedures (430107)

(Formerly CRIJ 2434)

This course introduces students to techniques used by police officers on patrol, including controlled substance identification, dealing with persons with abnormal behavior, traffic collision investigation, note taking and report writing, vehicle operations, traffic direction, crowd control, and jail operations. Prerequisites: Texas Peace Officer Law (CJLE 2421), approval of department chair, and Reading level 4. (4:3-4)

CJSA 1308 Criminalistics I (430104)

This is an introduction to the field of criminalistics. Topics include the application of scientific and technical methods in the investigation of crime, including location, identification, and handling of evidence for scientific analysis. Prerequisite: Reading level 4 (3:3-0)

CJSA 1312 Crime in America (430104)

This is a study of crime problems in historical perspective with consideration of social and public policy factors affecting crime, its impact and trends; social characteristics of specific crimes; and crime prevention. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJSA 1312 and CRIJ 1307.) (3:3-0)

CJSA 1313 Court Systems and Practices (430104)

This is an examination of the role of the judiciary in the criminal justice system. Topics include the structure of the American court system, prosecution, the right to counsel, pretrial release, the grand jury process, adjudication process, types and rules of evidence, and sentencing concepts. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJSA 1313 and CRIJ 1306.) (3:3-0)

CJSA 1317 Juvenile Justice System (430104)

This is a study of the juvenile justice process. Topics include specialized juvenile law, the role of the juvenile law, the role of the juvenile courts, the role of police agencies, the role of correctional agencies, and theories concerning delinquency. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJSA 1317 and CRIJ 1313.) (3:3-0)

CJSA 1322 Introduction to Criminal Justice (430104)

This is an overview of the criminal justice system. Topics include the history and philosophy of criminal justice, the definition of crime and its nature and impact. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJSA 1322 and CRIJ 1301.) (3:3-0)

CJSA 1327 Fundamentals of Criminal Law (430104)

This is a study of the nature of criminal law. Topics include philosophical and historical development, major definitions and concepts, classification of crime, elements of crimes and penalties, and individual criminal responsibilities. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJSA 1327 and CRIJ 1310.) (3:3-0)

CJSA 1342 Criminal Investigation (430104)

This is a study of investigative theory, the collection and preservation of evidence, sources of information, concepts of interviewing and interrogation, the use of forensic sciences, and trial preparation. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJSA 1342 and CRIJ 2314.) (3:3-0)

CJSA 1348 Ethics in Criminal Justice (430104)

(Formerly CRIJ 2329)

This is a study of ethical thought and issues facing the criminal justice professional. Topics include constitutional ethics, codes of conduct, and standards of conduct. Prerequisite: Reading level 4. (3:3-0)

CJSA 1351 Use of Force (430104)

(Formerly CRIJ 2316)

This is a study of the use of force, including an introduction to and statutory authority for the use of force, force options, deadly force, and related legal issues. The course fulfills the TCLEOSE Use of Force Intermediate Certificate requirements. Prerequisite: Reading level 4. (3:3-0)

CJSA 1359 Police Systems and Practices (430104)

This course explores the profession of the police officer. Topics include organization of law enforcement systems, the police role, police discretion, ethics, police-community interaction, and current and future issues. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJSA 1359 and CRIJ 2328.) (3:3-0)

CJSA 1373 Police/Community Relations (430107)

(Formerly CRIJ 2326)

This course explores the role of the individual officer in achieving and maintaining positive public response, inter-group relations, and public information. Prerequisite: Reading level 4. (3:3-0)

CJSA 1374 Crime Prevention (430107)

(Formerly CRIJ 1308)

This is a study of the prevention of crime through cooperative ventures between law enforcement agencies and the communities they serve. Emphasis on the prevention of crimes against property both in businesses and in the home. It includes the history of crime prevention, physical security measures, special problems in loss control, and security survey procedures. Prerequisite: Reading level 4. (3:3-0)

CJSA 2300 Legal Aspects of Law Enforcement (430104)

This is an exploration of police authority. Topics include responsibilities and constitutional restraints; the law of arrest, search and seizure; and police liability. Prerequisite: Reading level 4. (Note: Credit will not be given for both CJSA 2300 and CRIJ 2323.) (3:3-0)

CJSA 2302 Police Management, Supervision, and Related Topics (430103)

(Formerly CRIJ 1318)

This course focuses on techniques and theories regarding dealing with people, their performance, and their problems. Topics include basic supervision, leadership, time-management, first-line supervision, and management by objectives. Prerequisite: Reading level 4. (3:3-0)

CJSA 2323 Criminalistics II (430104)

This course focuses on both the theory and practice of crime scene investigation. Topics include report writing, blood and other body fluids, document examination, etchings, casts and molds, glass fractures, use of microscopes, and firearms identification. Prerequisite: Reading level 4 (3:3-0)

CJSA 2388 Internship Criminal Justice Studies (430104)

This is intermediate or advanced type of work-based instruction helps students synthesize new knowledge, apply previous knowledge, and gain experience managing the workflow. Practical experience is related to theory. Direct supervision is provided by the faculty or the work supervisor. An internship may be a paid or non-paid learning experience in a criminal justice profession. The course may be repeated if topics and learning outcomes vary. Prerequisite: department chair approval (3:0-9).

Culinary Arts

CHEF 1205 Sanitation and Safety (120503)

(Formerly CULA 1205)

This is a study of personal cleanliness; sanitary practices in food preparation: causes, investigation and control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards. Students learn fundamental principles and related legal, moral, and economic issues of sanitation and safety management in public health as related to food service institutions, hospitality industries, and other related operations. Prerequisite: Reading level 4. (2:2-0)

CHEF 1301 Basic Food Preparation (120503)

(Formerly RESM 1412, CULA 1301)

This course in fundamental principles of food preparation and cookery includes the study of the Brigade System, cooking techniques, material handling, heat transfer, sanitation, safety, nutrition, and professionalism. It also focuses on composition, nutritive value, and use of foods and the physical and chemical principles affecting preparation. (3:1-6)

CHEF 1305 Sanitation and Safety (120503)

(Formerly CULA 1305)

This is a study of personal cleanliness; sanitary practices in food preparation; causes, investigation, the control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards. (3:3-0)

CHEF 1310 Garde Manger (120503)

(Formerly RESM 2510, CULA 1409)

This study of specialty foods and garnishes emphasizes design, techniques, display of fine foods, and basic garde manger principles and training techniques for food services professionals. (3:2-4)

CHEF 1313 Food Service Operation/Systems (120503)

(Formerly Restaurant Management 136, RESM 1316, CULA 1313)

This course is an overview of the management information needs in the management of food and lodging properties. Emphasis placed on both front, back, and material management utilizing a computer system. (3:3-0)

CHEF 1314 A La Carte Cooking (120503)

(Not offered after Fall 2007)

This is a course in a la carte or "cooking to order" concepts. Topics include menu and recipe interpretation and conversion, organization of work station, employment of appropriate cooking methods, plating, and saucing principles. (3:2-4)

CHEF 1345 International Cuisine (120503)

(Formerly CULA 1345)

This is a study of classical cooking skills associated with the preparation and service of international and ethnic cuisines. Topics include similarities between food production systems used in the United States and in other regions of the world. (3:1-6)

Course Descriptions

CHEF 1401 Basic Food Preparation (120503)

(Formerly Restaurant Management 142, RESM 1412, CULA 1401)

This is a study of the fundamental principles of food preparation and cookery. Topics include Brigade System, cooking techniques, material handling, heat transfer sanitation, safety, nutrition, and professionalism. The course will include basic skills and terminology. (4:3-3)

CHEF 2301 Intermediate Food Preparation (120503)

(Formerly CULA 2301)

This is a continuation of the study of food preparation course. Topics include the concept of pre-cooked food items, as well as scratch preparation. The course covers the full range of food preparation techniques. Prerequisite: Reading level 4. (3:1-8)

CHEF 2365 Practicum (or Field Experience) - Culinary Arts/Chef Training (120503)

(Formerly RESM 2411, CULA 2365)

This course offers practical general workplace training supported by an individualized learning plan developed by the employer, the College, and student. The plan relates workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or not for pay. The course may be repeated if topics and learning outcomes vary. (3:0-21)

CHEF 2402 Saucier (120503)

(Formerly RESM 1413, CULA 2402)

This course focuses on instruction in the preparation of stocks, soups, classical sauces, contemporary sauces, accompaniments, and the pairing of sauces with a variety of foods. (4:3-3)

IFWA 1305 Food Service Equipment and Planning (120508)

(Formerly Restaurant Management 141, RESM 1311)

This is a study of various types of food service equipment and the planning of equipment layout for product flow and efficient operation. (3:3-0)

IFWA 1318 Nutrition for the Food Service Professional (120508)

(Formerly Home Economics 2313, HOEC 1313, RSTO 1317)

This introduction to nutrition includes a study of nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques. Students may not receive credit for IFWA 1318 if they have previously earned credit for RSTO 1217. (3:3-0)

IFWA 2437 Special Projects and Field Work (200401)

(Not offered after Fall 2007)

Students are assigned to real or simulated projects in campus facilities or off-campus locations which require the application of all knowledge and skills learned throughout the program. Prerequisite: Reading level 4. (4:1-8)

IFWA 2441 Specialized Food Preparation (120508)

(Formerly RESM 2420)

This is a study of ethnic/regional cooking with actual preparation of local favorite dishes and common international favorites. (4:3-3)

IFWA 2446 Quantity Procedures (120508)

This is an exploration of the theory and application of quality procedures for the operation of commercial, institutional, and industrial food services. Emphasis on quantity cookery and distribution. (4:2-8)

PSTR 1301 Fundamentals of Baking (120501)

(Formerly RESM 2413)

This course focuses on fundamentals of baking including, dough, quick breads, pies, cakes, cookies, tarts, and doughnuts. There is instruction in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and the use of proper flours. Prerequisite: Reading level 4. (3:2-4)

PSTR 1401 Fundamentals of Baking (120501)

(Formerly RESM 2413)

This is a course in the fundamentals of baking, including dough, quick breads, pies, cakes, cookies tarts, and doughnuts. Instruction in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, the evaluation of baked products, and the use of proper flours. (4:3-3)

PSTR 2331 Advanced Pastry Shop (120501)

(Formerly RESM 2414)

This is a study of classical desserts, French and international pastries, hot and cold desserts, ice creams and ices, chocolate work, and decorations. Emphasis on advanced techniques. (3:2-4)

PSTR 2431 Advanced Pastry Shop (120501)

(Formerly RESM 2414)

This is a study of classical desserts, French and International pastries, hot and cold desserts, ice creams, ice, chocolate work, and decorations. Emphasis on advanced techniques. (4:3-3)

RSTO 1217 Nutrition for the Food Service Professional (120504)

(Formerly HOEC 1313)

(Not offered after Spring 2007)

This is an introduction to nutrition, including nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques. It introduces fundamental principles of the basic food nutrients, their digestive and absorptive characteristics, and the relationship of food to the development and maintenance of health. It includes study of people's eating habits and the nutritional needs of all age groups. Students practice application of the concepts of good nutrition, to the planning of satisfying, and interesting meals for commercial and institutional food service operations. Prerequisite: Reading level 4. (2:2-0)

RSTO 1301 Beverage Management (120504)

(Formerly Restaurant Management 240, RESM 2310)

This is a study of the beverage service of the hospitality industry, including spirits, wines, beers, and non-alcoholic beverages. Topics include purchasing, resource control, legislation, marketing, physical plant requirements, staffing, serving, and the selection of wines to enhance foods. (3:3-0)

RSTO 1313 Hospitality Supervision (120504)

(Formerly Restaurant Management 145, RESM 1315)

This course focuses on fundamentals of recruiting, selection, and training of food service and hospitality personnel. Topics include job descriptions, schedules, work improvement, motivation, and applicable personnel laws and regulations. Emphasis on leadership development. (3:3-0)

RSTO 1325 Purchasing for Hospitality Operations (120504)

(Formerly Restaurant Management 133, RESM 1313)

This study of purchasing and inventory management of foods and other supplies includes practice in development of purchase specifications, determination of order quantities, formal and informal price comparison, proper receiving procedures, storage management, and issue procedures. Emphasis on product cost analysis, yields, pricing formulas, controls, and record keeping at each stage of the purchasing cycle. (3:3-0)

RSTO 2301 Principles of Food and Beverage Control (120504)

(Formerly Home Economics 436, HOEC 2336)

This study of financial principles and controls of food service operation includes a review of operation policies and procedures. Topics also include financial budgeting and cost analysis, emphasizing food and beverage labor costs, operational analysis, and international and regulatory reporting procedures. (3:3-0)

RSTO 2365 Practicum (or Field Experience) - Restaurant, Culinary, and Catering Management/ Manager (120504)

(Formerly Restaurant Management 252, RESM 2512, RESM 2415)

This course offers practical general workplace training supported by an individualized learning plan developed by the employer, the College, and student. The plan relates workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or not for pay. The course may be repeated if topics and learning outcomes vary. (3:0-21)

RSTO 2405 Management of Food Production and Service (120504)

(Formerly Restaurant Management 144, RESM 1414)

This is a study of quantity cookery and management problems pertaining to commercial and institutional food service, merchandising and variety in menu planning, and customer food preferences. It includes laboratory experiences in quantity food preparation and service. (4:3-3)

RSTO 2431 Food Service Management (120508)

This course covers the mastery of actual management experiences in supervision, training, planning, and control of a variety of food service operation formats, including cafeteria, table service, meetings, banquets, and catered events. Students may not receive credit for RSTO 2431 if they have previously earned credit for RSTO 2405. (4:2-8)

Dance

DANC 1101 Dance Composition I (5003015526)

This is an exploration of the qualitative use of the body through manipulation of the variables of space, time, weight and flow. (1:0-3)

DANC 1102 Dance Composition II (5003015526)

This course explores choreographic tools, with emphasis on basic compositional forms, spatial design, dynamics, rhythmic structure, character, and the use of props. Prerequisite: dance composition I. (1:0-3)

DANC 1151 Dance Performance I (5003015226)

This is an exploration of dance as an art form through participation in and performance of choreographed works. Co-requisite: Concurrent enrollment in ballet or modern technique or departmental chair approval required. (1:0-3)

DANC 1152 Dance Performance II (5003015226)

This is an exploration of dance as an art form through participation in and performance of choreographed works. Co-requisite: Concurrent enrollment in ballet or modern technique or department chair approval required. (1:0-3)

DANC 1341 Ballet I (5003015226)

This is an introduction to the theory, practice, and terminology of classical ballet with emphasis on the development and refinement of barre and center technique. Prerequisite: placement audition. (3:1-5)

DANC 1342 Ballet II (5003015226)

This continuation and progression of DANC 1341 emphasizes the development and refinement of barre and center technique. Prerequisite: placement audition. (3:1-5)

DANC 1345 Modern I (5003015226)

This course focuses on beginning technique in modern dance with emphasis on floor and center work, basic rhythm, and movement combinations. Prerequisite: placement audition. (3:1-5)

DANC 1346 Modern II (5003015226)

This continuation and progression of DANC 1345 emphasizes floor and center work, rhythm, and movement combinations. Prerequisite: placement audition. (3:1-5)

DANC 2151 Dance Performance III (5003015226)

This is an exploration of dance as an art form through participation in and performance of choreographed works. Co-requisite: Concurrent enrollment in ballet or modern technique or departmental chair approval required. (1:0-3)

DANC 2152 Dance Performance IV (5003015226)

This is an exploration of dance as an art form through participation in and performance of choreographed works. Co-requisite: Concurrent enrollment in a ballet or modern technique course or departmental chair approval required. (1:0-3)

DANC 2303 Dance Appreciation (5003015426)

This is an introduction to dance as an art form, with emphasis on historical perspectives, observation and analysis of live and video performance, and exploration/analysis of creative and expressive experiences in dance. Prerequisite: Reading level 7, Writing level 7. (3:3-0)

DANC 2325 Anatomy and Kinesiology

This is an exploration of the sciences of anatomy and kinesiology as they apply to and support the analysis of human movement. Prerequisite: Reading level 6, Writing level 6. (3:3-1)

DANC 2341 Ballet III (5003015226)

This course offers further exposure to the theory, practice, and terminology of classical ballet with emphasis on expansion and refinement of the skills developed in DANC 1341 and DANC 1342. Prerequisite: placement audition. (3:1-5)

DANC 2342 Ballet IV (5003015226)

This course offers further exposure to the theory, practice, and terminology of classical ballet with emphasis on expansion and refinement of the skills developed in DANC 2341. Prerequisite: placement audition. (3:1-5)

DANC 2345 Modern Dance III (5003015226)

DANC 2345 is intended to build upon and expand the technical skills developed in DANC 1345/1346, as well as to emphasize and enhance artistic aspects of movement. Prerequisite: placement audition. (3:1-5)

Course Descriptions

DANC 2346 Modern Dance IV (5003015226)

DANC 2346 is intended to build upon and expand the technical skills developed in DANC 2345, as well as to emphasize and enhance artistic aspects of movement. Prerequisite: placement audition. (3:1-5)

Developmental Studies

DEVS 0305 College Study Skills (3201015212)

(Formerly Special Services 135)

College study skills is designed for students who desire to increase their academic potential. The course provides students with learning strategies, test-taking techniques and additional information to increase their learning effectiveness. This course is not applicable to any degree. (3:3-0)

Diesel Technology

DEMR 1301 Shop Safety and Procedures (470605)

(Formerly DEMR 1313, DIEM 2403)

This a study of shop safety, rules, basic shop tools, and test equipment. Prerequisite: Reading level 4. (3:3-0)

DEMR 1306 Diesel Engine I (470605)

(Formerly DIEM 1501)

This course provides an introduction to the basic principles of diesel engines and systems. Prerequisite: Reading level 4. (4:2-4)

DEMR 1317 Basic Brake Systems (470605)

(Formerly DIEM 2523)

This introduction to the basic principles of brake systems of diesel powered equipment emphasizes maintenance, repairs, and troubleshooting. Prerequisite: Reading level 4. (3:2-4)

DEMR 1380 Cooperative Education - Diesel Mechanics (470605)

This course provides career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. This course is designed to substitute for a DEMA

three semester hour course in which a student has extensive diesel work experience and in which the student is currently working. The student must have permission from the lead diesel instructor before he/she can enroll in this class. This course can be taken only once for credit. Course includes a lecture component. Pre-requisite: 12 credit hours in diesel mechanics technology at San Jacinto College. (3:1-20)

DEMR 1405 Basic Electrical Systems (470605)

(Formerly DIEM 1523)

This is an introduction to the basic principles of electrical systems of diesel powered equipment with emphasis on starters, alternators, batteries, and regulators. Prerequisite: Reading level 4. (4:3-3) DEMR 1306.

DEMR 1410 Diesel Engine Testing and Repair I (470605)

(Formerly DIEM 1502)

This is an introduction to testing and repairing diesel engines, including related systems specialized tools. Prerequisite: Reading level 4. (4:3-3)

DEMR 1421 Power Train I (470605)

(Formerly DIEM 2523)

This introduction to fundamentals, repair, and theory of power trains includes clutches, transmissions, drive shafts, and differentials. Emphasis on inspection and repair. Specific attention will be paid to the Allison V-Drive, HD 740, World Transmission, and the 1000 and 2000 Series Transmissions. Prerequisite: Reading level 4. (4:3-3)

DEMR 1423 Heating, Ventilation, and Air Conditioning (HVAC) (470605)

(Formerly DIEM 1523, DEMR 1323)

This introduction of heating, ventilation, and air conditioning theory, testing and repair with emphasis on refrigerant reclamation, safety procedures, specialized tools and repairs. Prerequisite: Reading level 4. (4:3-3)

DEMR 1449 Diesel Engine II (470605)

(Formerly DEMR 1371)

This is an in-depth coverage of disassembly, repair, identification, evaluation, and reassembly of diesel engines. Prerequisite: Reading level 4. (4:3-3)

DEMR 1480 Cooperative Education - Diesel Mechanics (470605)

This course provides career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. This course is designed to substitute for a DEMA four semester hour course in which a student has extensive diesel work experience and in which the student is currently working. The student must have permission from the lead diesel instructor before he/she can enroll in this class. This course can be taken only once for credit. Course includes a lecture component. Pre-requisite: 12 credit hours in diesel mechanics technology at San Jacinto College. (3:1-20)

DEMR 2266 Field Experience - Diesel Engine Mechanic and Repairer (470605)

(Formerly DIEM 2301, DEMR 2388)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences may be paid or unpaid. The course may be repeated if topics and learning outcomes vary. Prerequisites: Reading level 4 and 15 credit hours in diesel technology at San Jacinto College. (2:0-16)

DEMR 2334 Advanced Diesel Tune-up and Troubleshooting (470605)

This course focuses on advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach. Prerequisite: Reading level 4. (3:2-4)

DEMR 2412 Diesel Engine Testing and Repair (470605)

(Formerly DIEM 1504, DEMR 1411)

This course focuses on testing and repairing diesel engines including related systems using specialized tools. Prerequisite: Reading level 4. (4:3-3)

DEMR 2432 Electronic Controls (470605)

This course provides advanced skills in diagnostic and programming techniques required by of electronic control systems. Prerequisite: Reading level 4. (4:3-3)

Dietetic Technology

DITA 1400 Dietary Manager I (513104)

(Formerly HOEC 1501)

This preparation for supervisory roles in food service departments emphasizes normal and therapeutic nutrition and food service systems management. Major topics include dietary and meal planning guidelines, sources and functions of nutrients, diet therapy, nutritional assessment and care, food production management and purchasing, and regulatory agencies. Co-requisite: FDNS 1168. (4:4-0)

DITA 1401 Dietary Manager II (513104)

(Formerly HOEC 1502)

This continuation of Dietary Manager I emphasizes food service sanitation and safety, and administrative and personnel management. Major topics include regulatory agencies, computer applications, production management, budgeting and cost control, personnel management, quality assurance, leadership skills, human relations, and communications. Co-requisite: FDNS 1168. (4:4-0)

FDNS 1103 Introduction to Dietetics (513101)

(Not offered after Summer 2009)

An introduction to the profession of dietetics in health care delivery systems. Includes roles and responsibilities of dietetics team members, standards, and ethics in dietetic practice. Emphasis on effective professional communications. Co-requisite: FDNS 2233. (1:1-0)

FDNS 1168 Practicum - Dietetics/ Dietitian (513101)

This course provides practical general workplace training supported by an individualized plan developed by employer, the College and student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. The course may be repeated if topics and learning outcomes vary. Co-requisite: DITA 1400 or DITA 1401. (1:0-10)

FDNS 1309 Nutrition in the Community (190501)

(Formerly Home Economics 433, HOEC 2333)

This is a study of the nutritional status of populations at the national, state, and local community levels. Topics include socioeconomic, cultural, and psychological influences on eating behavior; national and state health objectives; marketing strategies for objective implementation; and community nutrition programs serving risk-group populations. Basic teaching/counseling methods for the nutrition education of small groups and individual clients/patients are also reviewed. (3:3-0)

FDNS 1345 Medical Nutrition Therapy I (190501)

(Formerly Home Economics 333, HOEC 2332, HECO 1323)

This course focuses on applications of nutrition principles, and techniques of nutrition care for healthy individuals and patients/clients at low nutrition risk. Topics include nutrition risk screening, interviewing/counseling methods, diet evaluation, basic diet calculations, documentation. Prerequisite: HECO 1322. (3:3-0)

FDNS 1346 Medical Nutrition Therapy II (190501)

(Formerly Home Economics 435, HOEC 2335, MDDT 2331)

Principles of techniques of nutrition care for clients/patients at low to moderate nutrition risk. Includes a study of the scientific basis of diets for individuals with diabetes mellitus, pulmonary and cardiovascular disease, and weight control needs. Nutrition assessment parameters, nutrition care planning and evaluation, and menu editing methods. Prerequisites: FDNS 1345 and HECO 1322 (3:3-0)

FDNS 1360 Clinical-Dietetics/ Dietitian (RD) (513101)

(Formerly Home Economics 2380, HOEC 2318)

(Not offered after Fall 2009)
This is a health related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by a clinical professional. Specific detailed learning objectives are developed for each course by the faculty. Clinical experiences are unpaid external learning experiences. Prerequisites: FDNS 1103 and FDNS 2233 (3:0-10)

FDNS 1447 Medical Nutrition Therapy III (190501)

(Formerly HOEC 2338)

This course focuses on advanced principles and techniques of nutrition care for clients/patients at low to moderate risk. It includes a study of the scientific basis of diets for individuals with cancer, gastrointestinal disease, and renal disease. It also includes nutrition assessment parameters, nutrition care planning and evaluation, and menu editing methods. (4:4-0)

FDNS 2233 Dietetic Seminar (513101)

(Formerly Home Economics 1301, MDDT 2233)

This course focuses on mastery of the knowledge and performance requirements for dietetic technicians. Topics include standards of practice, professional ethics, evaluation of current literature, pre-employment activities, and obtaining and maintaining professional registration. Co-requisite: FDNS 1103. (2:2-0)

FDNS 2360 Clinical - Dietetics/ Dietitian (RD) (513101)

(Not offered after Summer 2009)

This is a health related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by a clinical professional. Specific detailed learning objectives are developed for each course by the faculty. Clinical experiences are unpaid external learning experiences. Prerequisite: FDNS 1360 (3:0-10).

FDNS 2460 Clinical-Dietetics/ Dietitian (RD) (513101)

(Not offered after Fall 2009)

This is a health related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by a clinical professional. Specific detailed learning objectives are developed for each course by the faculty. Clinical experiences are unpaid external learning experiences. Students may not receive credit for FDNS 2460 if they have previously earned credit for FDNS 1460. Prerequisite: FDNS 2360 (4:0-13).

HECO 1322 Nutrition & Diet Therapy (1905015109)

(Formerly Home Economics 233, HOEC 2323, HOEC 1322, Principles of Nutrition)

This course focuses on fundamental principles of human nutrition and metabolic processes. Topics include food selection and quality of nutrients in normal and therapeutic diets related to needs of individuals through the life cycle. (3:3-0)

Course Descriptions

IFWA 1318 Nutrition for the Food Service Professional (120508)

(Formerly HOEC 1313, RSTO 1317)

This introduction to nutrition includes the study of nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques. (3:3-0)

Drafting Technology

(See Engineering Design Graphics)

Drama

DRAM 1120 Rehearsal and Performance (5005015226)

(Formerly Drama 111, 112, 211, 212, DRAM 1111)

Open to all students interested in the theatre, this course offers credit for acting, technical work or other participation. Course may be taken a maximum of four times for credit. (1:0-6)

DRAM 1310 Theatre (5005015126)

(Formerly Drama 134, DRAM 1314)

This introduction to the basic practices, history, theories and styles of the theatre is a survey of major fields of theatrical art. Elementary stage techniques are studied, along with fundamental acting techniques. (3:3-0)

DRAM 1330 Technical Production I (5005025126)

(Formerly Drama 136, DRAM 1316)

In this introduction to the theory and practical application of theatre lighting, set design, and construction techniques, students are provided the opportunity to participate in actual production situations as members of stage crews. Workshop hours are scheduled as required. (3:3-0)

DRAM 1341 Stage Makeup (5005025226)

(Formerly DRAM 1318)

This course instructs the student actor in the theory and practice of stage makeup, encompassing all forms of corrective and character application. Enrollment is open to all students without prerequisite (3:3-0)

DRAM 1342 Introduction to Costuming (5005025326)

This course in costuming focuses on the design and building of stage costumes for production. Students learn to sketch costume designs and are responsible for a full costume plot for a production. Students also learn to sew and construct costumes, as well as to work within a given costuming budget. (3:2-2)

DRAM 1351 Acting I (5005065126)

(Formerly Drama 133, DRAM 1313)

This is an introduction to the basic skills and techniques of acting, with character analysis and development. Characterization and lab work focus on scenes from great dramatic literature. Rehearsal will be scheduled as required. (3:3-0)

DRAM 1352 Acting II (5005065126)

(Formerly Drama 234, DRAM 2314)

This course provides continuation and consolidation of the gains made in DRAM 1351. Rehearsal will be scheduled as required. Prerequisite: DRAM 1351. (3:3-0)

DRAM 2331 Technical Production II (5005025126)

(Formerly DRAM 1317)

This course provides advanced study of the theory and practical application of theatre lighting, set design, construction techniques, and stage sound. Students are provided the opportunity to participate in actual production situations as members of stage crews. Workshop hours are scheduled as required. Prerequisite: DRAM 1330 or approval of department chair. (3:3-0)

DRAM 2336 Voice and Diction (5005065226)

(Formerly Speech/Drama 232, DRAM 2312)

This course covers the development of effective habits in the use of the speaking voice and emphasizes the study of English phonetics, phrasing, intonation, and voice production. Training is given to enable the student to listen intelligently to the sound of his/her own voice. Students cannot receive credit for both SPCH 1342 and DRAM 2336. Prerequisite: Reading level 6. (3:3-0)

DRAM 2341 Oral Interpretation (2310015712)

(Formerly Speech/Drama 232, DRAM 2311)

In this introduction to oral interpretation of literature, students practice preparation and reading of printed material and gain practical experience in storytelling and choral speaking. There is instruction in techniques and analysis of literature to be read aloud, with emphasis on the techniques of oral reading. Students cannot receive credit for both SPCH 2341 and DRAM 2341. Prerequisite: Reading level 6. (3:3-0)

DRAM 2351 Acting III (5005065126)

This course promotes the development of basic skills and techniques of acting for the purpose of exploring performance and its relationship to various acting environments. Emphasis placed on acting choices that affect character and script analysis in regard to acting for the camera. This course includes a comparative study of stage acting vs. acting for the camera, using an interdisciplinary approach to art, music, philosophy and theater. Emphasis also placed on methods of relaxation, communication, and the cybernetic approach to film/video acting. Prerequisite: DRAM 1351 and DRAM 1352 or approval of the director of theatre. (3:3-2)

DRAM 2366 Introduction to Motion Picture Arts (5006025126)

In this comparative study of the different genres of motion pictures, emphasis is on the evaluation and appreciation of the motion picture structure within each genre. Film production, acting, writing, and special effects are discussed. Full length movies are watched in their entirety during a two-hour lab. Visual, oral, and written evaluations of each movie are required. (3:2-2)

Economics

ECON 2301 Principles of Macroeconomics (4506015125)

(Formerly Economics 233, ECON 2313)

This is a survey of contemporary economic problems, including the concepts of national income and economic growth, determinants of aggregate demand and supply, business cycles, stabilization policies, and international economics and economic systems. Prerequisites: Reading level 7, Writing level 7, and Math level 7. (3:3-0)

ECON 2302 Principles of Microeconomics (4506015125)

(Formerly Economics 234, ECON 2314)

This is a survey of the concepts of price determination and resource allocations in a market economy, including the economics of consumption, production, and factor income, and the relationships of money and government to the market. Prerequisites: Reading level 7, Writing level 7, and Math level 7. (3:3-0)

Education

EDUC 1300 Foundations for Success (4203015125)

This course provides a study of the research and theory in the psychology of learning, cognition and motivation including factors that impact learning, and application of learning strategies. Students will be expected to continually integrate and apply skills mastered in this course to become effective and efficient learners. This course is also listed as PSYC 1300; however, a student cannot earn credit hours for both PSYC 1300 and EDUC 1300. Prerequisites: Math level 4, Reading and Writing level 6. (3:3-0)

EDUC 1301 Introduction to the Teaching Profession (1301015109)

This is an integrated pre-service course and content experience that provides active recruitment and institutional support of students interested in a teaching career, especially in high-need fields. It provides opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations. This course provides support from College and school faculty, preferably in small cohort groups, for the purpose of introduction to and analysis of the culture of schooling and classrooms. The course will be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Students will complete 16 hours of field experience in P-12 classrooms. Prerequisites: Reading level 6, Writing level 6. (3:3-1)

EDUC 2301 Introduction to Special Populations (1301015109)

This course provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic and academic diversity and equity with an emphasis on factors that facilitate learning. Students will be provided with opportunities to participate in early field observations of P-12 special populations. The course will be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Students will complete 16 hours of field experience with P-12 special populations. Prerequisites: Reading level 6, Writing level 6 and EDUC 1301. (3:3-1)

Electrical Technology

Credit Courses

ELPT 1215 Electrical Calculations I (460301)

This is an introduction to mathematical applications utilized to solve problems in the electrical field. Topics include fractions, decimals, percentages, simple equations, ratio and proportion, unit conversions, and applied geometry. Electrical calculations to solve DC and AC electrical circuits are included. (2:2-0)

ELPT 1311 Basic Electrical Theory (460301)

(Formerly ELEC 1310)

This course in basic theory and practice of electrical circuits focuses on calculations as applied to alternating and direct current. It also covers electrical terminology, circuit analysis, and mathematical formulas as applied to direct and alternating current circuits. (3:2-2)

ELPT 1325 National Electric Code I (460301)

(Formerly ELEC 1311)

This is an introductory study of the National Electrical Code (NEC) for those employed in a field requiring knowledge of the code NEC. Emphasis on wiring design, protection, methods and materials; equipment for general use, and basic calculations. (3:3-0)

ELPT 1345 Commercial Wiring (460301)

This course provides instructions in commercial wiring methods. Includes overcurrent protection, raceway panel board installation, proper grounding techniques, and associated safety procedures. The National Electrical Code (NEC) is used to size branch circuits, feeders, service equipment, outlet and junction boxes, and conduit; installation of lighting, and utilization of equipment. Students gain experience in safe workplace practices, the proper use of hand tools and ladders, interpreting blueprints and specifications, bending and installation of conduit, installation of armored cable, and wiring of devices, load centers, and service equipment. (3:2-2)

ELPT 1351 Electrical Machines (460301)

(Formerly ELEC 1312)

This course reviews the general principles and fundamentals of direct current (DC) motors, single-phase and polyphase alternating current (AC) motors, generators, and alternators. Emphasis on their construction, characteristics, efficiencies, starting, and speed control. Prerequisite: ELPT 1311. (3:2-2)

ELPT 1355 Electronic Applications (460301)

This course is a study of electronic principles and the use of electronic devices. Electronic devices include diodes, transistors, and rectifiers. There is special focus on Zener diodes, light emitting diodes, silicon controlled rectifiers (SCRs), diacs, triacs, and power supplies. Prerequisite: ELPT 1311 (3:2-2)

ELPT 1357 Industrial Wiring (460301)

Wiring methods used for industrial installations. Includes motor circuits, raceway and bus way installations, proper grounding techniques, and associated safety procedures. (3:2-2)

ELPT 1429 Residential Wiring (460301)

(Formerly ELEC 1415)

This study of wiring methods for single family and multi-family dwellings includes load calculations, service entrance sizing, proper grounding techniques, and associated safety procedures. (4:3-3)

ELPT 1440 Master Electrician Exam Review I (460301)

This is an introductory study of electrical theory, code calculations, and interpretations applicable to becoming a Master Electrician. Emphasizes residential, commercial, and industrial installations using the current edition of the National Electrical Code (NEC) and local ordinances. Prerequisite or co-requisite: ELPT 2325 or approval of department chair. (4:4-0)

ELPT 1441 Motor Controls (460301)

(Formerly ELEC 2415)

This is a study of operating principles dealing with solid-state control and conventional controls, along with their practical applications. Topics include braking, jogging, plugging, safety interlocks, wiring, and schematic diagram interpretations. Emphasis on practical wiring, ladder diagrams, relay logic and timers. Prerequisite: ELPT 1311 or approval of department chair. (4:3-3)

Course Descriptions

ELPT 2215 Electrical Calculations II (460301)

This further study of mathematical applications utilized to solve problems in the electrical field includes fractions, decimals, ratio and proportion, applied geometry, and utilization of right triangles to calculate electrical values. It also covers power factor correction, fault currents, neutral currents, conductor ampacity and other advanced calculations. Prerequisite: ELPT 1215 or approval of department chair. (2:2-0)

ELPT 2301 Journeyman Electrician Exam Review (460301)

(Formerly ELEC 2310)

This course provides preparation for journeyman electricians, with emphasis on calculations and the National Electrical Code (NEC). Special attention is directed toward test taking skills and practice exams as they apply to the local area journeyman exams. Prerequisite: ELPT 2325 or approval of the department chair. (3:3-0)

ELPT 2305 Motors and Transformers (460301)

(Formerly ELPT 2405)

This course focuses on the operation of single- and three-phase motors and transformers. Includes transformer banking, power factor correction, and protective devices. Also included are lessons on three-phase power concepts, transformer and motor connections, transformer and motor metering, and transformer and motor troubleshooting theory. Prerequisite: ELPT 1311 or approval of the department chair (3:3-1)

ELPT 2319 Programmable Logic Controllers I (460301)

This course covers the fundamentals of programmable logic controllers, principles of operation, and numbering systems as applied to electrical controls. Includes history, terminology, typical applications, hardware, and software. Incorporates lab and project activities that address operating, monitoring programming, troubleshooting, and repairs of PLC controlled lab trainers as well as actual industrial equipment. (3:2-2)

ELPT 2325 National Electrical Code II (460301)

(Formerly ELEC 1313)

This course provides an in-depth coverage of the National Electrical Code (NEC) for those employed in fields requiring knowledge of the NEC. Emphasis on wiring protection and methods, special conditions, and advanced calculations. Prerequisite: ELPT 1325 or department chair approval. (3:3-0)

ELPT 2337 Electrical Planning and Estimating (460301)

(Formerly ELEC 2313)

This course focuses on planning and estimating for residential, commercial and industrial wiring systems. Statistical procedures of various methods of estimating are introduced, along with a variety of electrical techniques. Prerequisite: ELPT 2325 or approval of department chair. (3:2-2)

ELPT 2343 Electrical Systems Design (460301)

(Formerly ELEC 2318)

This is a course in electrical design of commercial and/or industrial projects, including building layout, types of equipment, placement, sizing of electrical equipment, and all electrical calculations according to the requirements of the National Electrical Code (NEC). Prerequisite: ELPT 2325 or approval of the department chair. (3:3-0)

ELPT 2364 Practicum-Electrical and Power Transmission Installation/Installer, General (460301)

This course provides practical general workplace training supported by an individualized learning plan developed by the employer, college, and student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for paid or unpaid. The course may be repeated if topics and learning outcomes vary. Prerequisite: approval of the department chair. (3:0-21)

ELPT 2449 Industrial Automation (460301)

(Formerly ELEC 2418)

This course provides an advanced study of electrical control systems, applications, and interfacing utilized in industrial automation. Ladder logic diagramming and programmable logic controllers are covered as they apply to electrical controls. Prerequisite: ELPT 1441. (4:3-3)

Non-Credit Continuing Education Courses

IEIR 1002 Direct Current: Electrical IB (460301)

(Continuing Education Course)

This course focuses on fundamentals of direct current, including Ohm's Law. Emphasis on methods of analyzing series, parallel, and combination circuits, including measurement devices. (128 contact hours)

IEIR 1006 Electric Motors: Electrical 3 (460301)

(Continuing Education Course)

This course focuses on fundamentals of single-phase and three-phase alternating current motors and direct current motors, including operating principles, characteristics, application, selection, installation, maintenance, and troubleshooting. (128 contact hours)

IEIR 1012 Distribution Systems: Electrical 2 (460301)

(Continuing Education Course)

This is a course in fundamentals of distribution systems, including study of single-phase and three-phase systems, grounding, ground fault protection, and the National Electric Code (NEC). (128 contact hours)

ELPT 2043 Electrical Systems Design: Electrical 4 (460301)

(Continuing Education Course)

This course promotes skill development in the electrical design of a commercial or industrial project, including building layout, types of equipment, placement, sizing of electrical equipment, and all electrical calculations according to the requirements of the National Electrical Code (NEC). (128 contact hours)

Electronics Instrumentation

(See Instrumentation Technology)

Electronics Technology

CETT 1215 Digital Applications (151201)

This course is an investigation of combinational and sequential logic elements and circuits, with emphasis on design and troubleshooting of combinational and sequential circuits. (2:1-2)

CETT 1303 DC Circuits (151201)

(Formerly ELTE 1312)

This is a study of the fundamentals of direct current including Ohm's law, Kirchoff's laws, and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements. (3:2-2)

CETT 1305 AC Circuits (151201)

(Formerly ELTE 1314)

This is a study of the fundamentals of alternating current, including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Prerequisite: CETT 1303 or department chair approval. (3:2-2)

CETT 1325 Digital Fundamentals (151201)

(Formerly ELTE 1313)

This entry-level course in digital electronics covers number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combinational logic. Emphasis on circuit logic analysis and troubleshooting digital circuits. (3:2-2)

CETT 1329 Solid State Devices (151201)

(Formerly ELTE 1316)

This is a study of diodes, transistor characteristics and other semiconductor devices, including analysis of static and dynamic characteristics. (3:2-2)

CETT 1345 Microprocessor (151201)

(Formerly ELTE 1317)

This introductory course in microprocessor software and hardware focuses on architecture, timing sequence, operation, and programming. It also reviews appropriate software diagnostic language and tools. Prerequisite: CETT 1325 or department chair approval. (3:2-2)

CETT 1349 Digital Systems (151201)

(Formerly ELTE 1315)

This course in electronics covers digital systems. Emphasis on application and troubleshooting digital systems using counters, registers, code converters, multiplexers, analog-to-digital, and digital-to-analog circuits, and large-scale integrated circuits. Prerequisite: CETT 1325 or department chair approval. (3:2-2)

CETT 1357 Linear Integrated Circuits (151201)

(Formerly ELTE 2318)

This is a study of the characteristics, operations, stabilization, testing, and feedback techniques of linear integrated circuits. It focuses on computation, measurements, instrumentation, and active filtering. Prerequisite: CETT 1329 or department chair approval. (3:2-2)

CETT 2449 Research and Project Design (1504020)

This course focuses on the principles of electrical/electronic design, encompassing schematics wiring diagrams, materials lists, operating characteristics, completion schedules, and cost estimates. (4:3-3).

CPMT 1303 Introduction to Computer Technology (151202)

(Formerly ELTE 1311)

This fundamental computer course provides in-depth explanation of computer procedures, hardware, and software. Emphasis is on terminology, acronyms, and hands-on activities. (3:2-2)

CPMT 1345 Computer Systems Maintenance (151202)

(Formerly ELTE 2319)

Through examination of the functions of the components within a computer system, students develop skill in the use of test equipment and maintenance aids. Prerequisite: CPMT 1303 or department chair approval. (3:2-2)

CPMT 1349 Computer Networking Technology (151202)

This beginning course in computer networks focuses on networking fundamentals, terminology, hardware, software, and network architecture. It includes study of local/wide area networking concepts and networking installations and operations. Prerequisite: CPMT 1345 or department chair approval. (3:2-2)

CPMT 2333 Computer Integration (151202)

(Formerly ELTE 2341)

This is an advanced course in integration of hardware, software, and applications. A key focus is customization of computer systems for specific applications in engineering, multimedia, or data acquisition. Prerequisite: CPMT 1345 or department chair approval. (3:2-2)

CPMT 2345 Computer System Troubleshooting (470104)

(Formerly ELTE 2423)

This course focuses on principles and practices involved in computer system troubleshooting techniques and repair procedures, including advanced diagnostic test programs and the use of specialized test equipment. Prerequisite: CPMT 1345 or department chair approval. (3:2-2)

CPMT 2349 Advanced Computer Networking (150402)

This is an in-depth study of network technology, with emphasis on network operating systems, network connectivity, hardware, and software. It helps students gain mastery of implementation, troubleshooting, and maintenance of LAN and/or WAN network environments. Prerequisite: CPMT 1349. (3:2-2).

CSIR 1344 General Communication Circuits I (470103)

This course is designed to provide the student with an understanding of the basic theory and operation and troubleshooting of communication circuits used in radio communication electronic systems. Prerequisite: CETT 1305 or department chair approval. (3:3-0)

EECT 1340 Telecommunications Transmission Media (150305)

Fundamentals of telecommunications media, including installation, maintenance, and troubleshooting. Topics address media characteristics and connectorization. (3:2-2)

EECT 2367 Practicum, (Field Experience) Electronic Technology/Technician (150303)

(Formerly ELTE 2340)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be for pay or no pay. The course may be repeated if topics and learning outcomes vary. Prerequisite: CPMT 1345 or department chair approval. (3:1-20)

EECT 2433 Telephone Systems (150303)

This is a study of installation and maintenance of systems including telephone sets, public switched networks, local exchanges, networks, two-and four-wire systems. Topics include tip and ringing requirements and digital transmission techniques. (4:4-0)

EECT 2439 Communications Circuits (150303)

(Formerly ELTE 2422)

This is a study of communications systems, with emphasis on amplitude modulation, frequency modulation, phase modulation, and digital pulse modulation. There is a discussion of several types of modulators, demodulators, receivers, transmitters, and transceivers. Prerequisite: CETT 1357 or department chair approval. (4:3-3)

Course Descriptions

ELMT 2330 Final Project (150403)

The student will be required to plan and develop a project consisting of research, design, layout, construction and operation of an electrical-mechanical project. A formal written report and a demonstration and presentation of process and results is required. (3:2-2)

ELMT 2333 Industrial Electronics (150403)

(Formerly ELTE 2321)

This is a study of devices, circuits, and systems primarily used in automated manufacturing and/or process control, including computer controls and interfacing between mechanical, electrical, electronic, and computer equipment. It also presents programming schemes. Prerequisite: CETT 1357 or department chair approval. (3:2-4)

Emergency Medical Technology

EMSP 1160 Clinical-Emergency Medical Technician-Basic (510904)

(Formerly EMMT 1111)

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by a clinical professional. Specific detailed learning objectives are developed for the course. Continuous enrollment may be required until these objectives are met. Pre- or co-requisites: EMSP 1501 or department chair approval. Four hours orientation, 32 hours clinical, 48 field hours. (1:0-5.25)

EMSP 1260 Clinical-Emergency Medical Technician-Intermediate (510904)

(Formerly EMMT 1114 and EMMT 1116)

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by a clinical professional. Specific detailed learning objectives are developed for the course. Continuous enrollment may be required until these objectives are met. Pre- or co-requisites: EMSP 1338, EMSP 1355, EMSP 1356 or department chair approval. Four hours orientation, 64 hours clinical, sixty-four field hours and six credentialing practical hours. (2:0-8.75)

EMSP 1338 Introduction to Advanced Practice (510904)

This is an exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital. The curriculum is based on Department of Transportation National Standard Curriculum. The student must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Prerequisite: EMSP 1160, EMSP 1501 or department chair approval. Reading level 6, Writing level 6 and Math level 6. Forty lecture and 24 laboratory hours. (3:2.5-1.5)

EMSP 1355 Trauma Management (510904)

This is a detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with traumatic injuries. The curriculum is based on Department of Transportation National Standard Curriculum. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Pre- or co-requisite: EMSP 1338, EMSP 1356, or department chair approval. Reading level 6, Writing level 6 and Math level 6. Forty lecture and 24 laboratory hours. Including international trauma life support-advanced course. (3:2.5-1.5)

EMSP 1356 Patient Assessment and Airway Management (510904)

This is a detailed study of the knowledge and skills required to reach competence in performing patient assessments and airway management. The curriculum is based on Department of Transportation National Standard Curriculum. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Pre- or co-requisites: EMSP 1338, EMSP 1355 or department chair approval. Reading level 6, Writing level 6 and Math level 6. Thirty-two lecture and 32 laboratory hours. (3:2-2)

EMSP 1371 Anatomy and Physiology for Emergency Care (510904)

(Formerly VNSG 1320)

This course is an introduction into normal anatomy and physiology of the human body with a particular emphasis and clinical correlation and application to emergency care. Included is an introduction to the pathophysiology of common injuries and illnesses found in the emergency care setting. Prerequisites: Reading level 6, Writing level 6, Math level 6. Forty-eight lecture hours and 16 lab hours including field trips. (3:3-1)

EMSP 1501 Emergency Medical Technician (510904)

(Formerly EMMT 1613)

This introduction to the level of emergency medical technician-basic (EMT-B), includes all the skills necessary to provide emergency medical care at a basic life support level with an ambulance service or other specialized services. The curriculum is based on Department of Transportation National Standard Curriculum. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Co-requisite: EMSP 1160. Reading level 6, Math level 4, Writing level 4. 64 lecture, 64 laboratory and eight hours of cardiopulmonary resuscitation. (5:4-4.5)

EMSP 2161 Clinical-Emergency Medical Technician-Paramedic I (510904)

(Formerly EMMT 2114)

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by a clinical professional. Specific detailed learning objectives are developed for the course. Continuous enrollment may be required until these are met. Pre- or co-requisites: EMSP 2348, EMSP 2244 or department chair approval. Four hours orientation, 64 hours clinical. (1:0-4.25)

EMSP 2162 Clinical-Emergency Medical Technician-Paramedic II (510904)

(Formerly EMMT 2115)

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by a clinical professional. Specific detailed learning objectives are developed for the course. Continuous enrollment may be required until these are met. Pre- or co-requisites: EMSP 2330, EMSP 2434 or department chair approval. Four hours orientation, 64 hours clinical. (1:0-4.25)

EMSP 2168 Practicum/Field Experience-Emergency Medical Technician-Paramedic (510904)

(Formerly EMMT 2116)

Practical, general workplace training supported by an individualized learning plan developed by the employer, the College and student. Direct supervision is provided by a health care professional. Practical/field experiences are unpaid external learning

experiences. Specific detailed learning objectives are developed for the course. Continuous enrollment may be required until these are met. Pre- or co-requisite: EMSP 2338, EMSP 2243 or department chair approval. Four hours orientation, 144 field hours and eight credentialing practical examination hours. (1:0-9.75)

EMSP 2243 Assessment Based Management (510904)

This is one of the capstone courses of the EMSP program designed to provide for teaching and evaluating comprehensive assessment-based patient care management. At the completion of this module, students will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for patients with common complaints. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Pre- or co-requisite: EMSP 2168, EMSP 2338 or department chair approval. Reading level 6, Writing level 6 and Math level 6. Sixty-four laboratory hours. (2:0-4)

EMSP 2330 Special Populations (510904)

This is a detailed study of the knowledge and skills necessary to reach competence in the assessment and management of ill or injured patients in non-traditional populations. The curriculum is based on Department of Transportation National Standard Curriculum. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Pre- or co-requisite: EMSP 2161 or department chair approval. Reading level 6, Writing level 6 and Math level 6. Forty lecture and 24 laboratory hours, including either pediatric advanced life support or pediatric education for pre-hospital providers course. (3:2.5-1.5)

EMSP 2338 EMS Operations (510904)

This is a detailed study of the knowledge and skills necessary to reach competence to safely manage the scene of an emergency. The curriculum is based on Department of Transportation National Standard Curriculum. Practical field exercises are performed and some may require weekend participation. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Prerequisite: department chair approval. Reading level 6, Writing level 4, Math level 4. Twenty-four lecture hours, 72 laboratory hours. (3:1.5-4.5)

EMSP 2348 Emergency Pharmacology (510904)

A comprehensive course covering all aspects of the utilization of medications in treating emergency situations, the course is designed to complement cardiology, special populations and medical emergency courses. The curriculum is based on the Department of Transportation National Standard Curriculum. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Prerequisite: EMSP 1260 or department chair approval. Reading level 6, Writing level 6 and Math level 6. Thirty-two lecture and 32 laboratory hours. (3:2-2)

EMSP 2434 Medical Emergencies (510904)

This is a detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with medical emergencies. The curriculum is based on Department of Transportation National Standard Curriculum. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Pre- or co-requisite: EMSP 2330 or department chair approval. Reading level 6, Writing level 6 and Math level 6. Sixty-four lecture and 16 laboratory hours. (4:4-1)

EMSP 2444 Cardiology (510904)

This is a detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with cardiac emergencies. The curriculum is based on Department of Transportation National Standard Curriculum. Students must meet the expected outcomes and terminal objectives of the class. Continuous enrollment may be required until these are met. Pre- or co-requisite: EMSP 2348 co-requisite: EMSP 2161 or the department chair approval. Reading level 6, Writing level 6 and Math level 6. Forty-eight lecture and 48 laboratory hours, including advanced cardiovascular life support course. (4:3-3)

Engineering

ENGR 2301 Engineering Mechanics I - Statics (1411015210)

(Formerly Engineering 233, 2333)
This is a calculus-based study of composition and resolution of forces, equilibrium of force systems, friction, centroids, and moments of inertia. Prerequisite: PHYS 2425. Co-requisite: MATH 2414. (3:3-0)

ENGR 2302 Engineering Mechanics II - Dynamics (1411015310)

(Formerly Engineering 234, 2334)
This is a calculus-based study of dynamics of rigid bodies, force-mass-acceleration, work-energy, and impulse-momentum computation. Prerequisite: ENGR 2301. Co-requisite: MATH 2415. (3:3-0)

ENGR 2304 Computer Programming (1102015207)

(Formerly Engineering 232, 2332)
This is an introduction to computer programming using the FORTRAN 77 language for the solution of mathematical and engineering problems. Students learn to create and compile programs using IBM-compatible personal computers. Programming projects include numerical approximation of functions, numerical integration, solution of linear systems, and curve-fitting. Prerequisite: MATH 2413 or approval by department chair. (3:3-0)

Engineering Design Graphics

ARCE 1421 Architectural Illustration (040901)

(Formerly DRAF 1415, DFTG 1415)
This course focuses on architectural drawing and sketching emphasizing freehand drawing, perspectives, delineation in various media, and development of students' graphical expression. It includes an introduction to various reproduction methods. Prerequisite: DFTG 1409 or DFTG 1413 or the department chair approval. (4:3-3)

ARCE 1452 Structural Drafting (040901)

(Formerly DRFT 2433, DFTG 2410)
This course is a study of structural systems including concrete foundations and frames, wood framing and trusses, and structural steel framing systems, including detailing of concrete, wood, and steel to meet industry standards of the American Institute of Steel Construction and The American Concrete Institute. Prerequisite: DFTG 1409 or the department chair approval. (4:3-3)

Course Descriptions

ARCE 2444 Statics & Strength of Materials (040901)

(Formerly ENGR 2332, DFTG 2444)

This course focuses on internal effects of forces acting upon elastic bodies and the resulting changes in form and dimensions, including stress, shear, bending moments, and simple beam design. Prerequisite: Math 1316. (4:4-0)

ARTV 1402 Introduction to Technical Animation and Rendering (100304)

(Formerly DFTG 2471, DFTG 1402)

This course provides basic study of technical computer models and animation, including basic animation principles, model creation, light sources, camera positioning, rendering, importing, and modification of external files. (4:3-3)

ARTV 1440 Intermediate Technical Animation and Rendering (151302)

(Formerly DFTG 247, DFTG 1441)

This course focuses on three-dimensional (3-D) modeling and rendering techniques including lighting, staging, camera, and special effects, emphasizing 3-D modeling building blocks using primitives to create simple and complex architectural/mechanical models. (4:3-3)

DFTG 1405 Technical Drafting (151301)

(Formerly ENGR 1478)

This is an introduction to the principles of drafting terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views and reproduction processes. (4:3-3)

DFTG 1409 Basic Computer-Aided Drafting (151302)

(Formerly DRAF 2417, DRFT 2417)

This introduction to computer-aided drafting, emphasizes setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects; adding text and dimensions; using layers, and coordinate systems; and plot/print to scale. Prerequisite or co-requisites: DFTG 1405 or DFTG 1413 or department chair approval. (4:3-3)

DFTG 1410 Specialized Basic Computer-Aided Drafting (CAD) (151302)

(Formerly DFTG 1419, DRFT 1419)

This is a supplemental course to basic computer-aided drafting using an alternative computer-aided drafting (CAD) software to create detail and working drawings. Prerequisite: DFTG 1405 or department chair approval. (4:3-3)

DFTG 1413 Drafting for Specific Occupations (151301)

(Formerly DRAF 1411, DRFT 1411)

This discussion of theory and practice with drafting methods and the terminology required for non-drafting majors to prepare working drawings in their occupational fields. (4:3-3)

DFTG 1417 Architectural Drafting-Residential (151303)

(Formerly DRAF 1415, DRFT 1415)

This course focuses on architectural drafting procedures, practices, and symbols, including preparation of detailed working drawings for residential structures with emphasis on light frame construction methods. Prerequisite: DFTG 1409 or DFTG 1413 or department chair approval. (4:3-3)

DFTG 1445 Parametric Modeling and Design (151306)

This course focuses on parametric-based design software for mechanical assembly design and drafting. Prerequisite: DFTG 2440 or department chair approval. (4:3-3)

DFTG 1458 Electrical/Electronics Drafting (151305)

(Formerly DRAF 2413, DRFT 2413, DFTG 2475, DFTG 2416)

(Not offered after Spring 2007)

This course focuses on electrical and electronic drawings stressing modern representation used for block diagrams, schematic diagrams, logic diagrams, wiring/assembly drawings, printed circuit board layouts, motor control diagrams, power distribution diagrams, and electrical one-line diagrams. Prerequisite: DFTG 1409 or DFTG 1413 or department chair approval. (4:3-3)

DFTG 2386 Internship-Drafting and Design Technology/Technician, General (151301)

(Formerly DRFT 2318, DRFT 2367)

This is a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the College and the employer. A basic, intermediate, or advanced type of non-health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Direct supervision is provided by a faculty member or work supervisor. An internship may be a paid or unpaid learning experience. Prerequisites: 16 hours of engineering design graphics courses (eight of these credits must be earned at San Jacinto College). The job description for the worksite must relate to the general curriculum of the engineering design graphics department. (3:0-18)

DFTG 2402 Machine Drafting (151306)

(Formerly DRAF 1412, DRFT 1412)

This course focuses on production of detail and assembly drawings of machines, threads, gears, cams, tolerances and limit dimensioning, surface finishes, and precision drawings. Prerequisite: DFTG 1409 or department chair approval. (4:3-3)

DFTG 2405 Printed Circuit Board Design (151305)

(Formerly DRAF 2425, DRFT 2425, DFTG 2404)
(Not offered after Spring 2007)

This course includes single-sided and double-sided printed circuit board design, emphasizing the drawings, standards, and processes required to layout printed circuit board and manufacturing documentation. Prerequisite: DFTG 1409 or department chair approval. (4:3-3)

DFTG 2406 Machine Design (151306)

This course focuses on the theory and practice of design. Projects in problem solving, including press fit, bolted and welded joints, and transmission components. Prerequisite: DFTG 1409 or department chair approval. (4:3-3)

DFTG 2407 Electrical Drafting (151301)

(Formerly DRFT 2476)

This course is a study of lighting, control systems and power layouts, electrical and safety codes, load factors, and distribution requirements. Prerequisites: DFTG 1409 or department chair approval. (4:3-3)

DFTG 2408 Instrumentation Drafting (151305)

(Formerly DRFT 2432)

Principles of instrumentation as applicable to industrial applications, fundamentals of measurement and control devices, currently used in ISA (Instrumentation Society of America) symbology, basic flow sheet layout, and drafting practices. Prerequisite: DFTG 1409 or department chair approval. (4:3-3)

DFTG 2417 Descriptive Geometry (151301)

(Formerly DFTG 1456)

This course focuses on graphical solutions to problems involving points, lines, and planes in space. Prerequisite: DFTG 1405. (4:3-3)

English

DFTG 2419 Intermediate Computer-Aided Drafting with MicroStation (151302)

(Formerly DRFT 2420, DFTG 1452)

This course continues the study of practices and techniques used in basic computer-aided drafting emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, construction of 3-dimensional drawings, interfacing 2-D and 3-D environments, and extracting data. This course uses MicroStation software. Prerequisite: DFTG 1410 or the department chair approval. (4:3-3)

DFTG 2421 Topographic Drafting (151301)

(Formerly DFTG 1414, DFTG 1448)

This course focuses on plotting of surveyors' field notes including drawing elevations, contour lines, plan and profiles, and laying out traverses. Prerequisite: DFTG 1409 or the department chair approval. (4:3-3)

DFTG 2423 Pipe Drafting (151301)

(Formerly DRFT 2412, DFTG 1444)

This is a study of pipe fittings, symbols, and specifications and their applications to the piping process system, including the creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics. Prerequisites: DFTG 1405 or department chair approval. (4:3-3)

DFTG 2428 Architectural Drafting-Commercial (151303)

(Formerly DRFT 2414, DFTG 1454)

This course focuses on architectural drafting procedures, practices, and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods. Prerequisite: DFTG 1409 or DFTG 1413 or the department chair approval. (4:3-3)

DFTG 2432 Advanced Computer-Aided Drafting (151302)

(Formerly DRFT 2435)

This course focuses on advanced techniques, including the use of a customized system and the presentation of advanced drawing applications, such as three-dimensional solids modeling and linking graphic entities to external non-graphic data. Prerequisite: DFTG 1409 or the department chair approval. (4:3-3)

DFTG 2436 Computer-Aided Drafting Programming (151302)

(Formerly DRFT 2430)

This course focuses on the use of programming language to enhance CAD software. Prerequisite: DFTG 1409 or the department chair approval. (4:3-3)

DFTG 2438 Final Project - Advanced Drafting (151301)

This is a drafting course in which students participate in a comprehensive project from conception to conclusion. Prerequisite: Sophomore standing and the department chair approval. Completion of all engineering design graphics requirements and elective courses for the A.A.S. Degree and/or the certificate of technology. (4:2-4)

DFTG 2440 Solid Modeling/Design (151302)

This is a computer-aided modeling course, emphasizing the development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work. Prerequisites: DFTG 1409 or the departmental chair approval. (4:3-3)

DFTG 2445 Advanced Pipe Drafting (151301)

(Formerly DRAF 2427, DFTG 2474)

This course is an expansion of pipe drafting concepts, building on basic principles acquired in pipe drafting. Prerequisite: DFTG 2423 or department chair approval. (4:3-3)

DFTG 2447 Advanced Technical Animation and Rendering (100304)

(Formerly DFTG 2473, DFTG 2437)

This course provides advanced three-dimensional (3-D) modeling and rendering techniques using industry standard software, including organize modeling techniques, particle and volumetric effects, and setting up a model with weight maps, hierarchies, and constraints. It emphasizes advanced use of camera settings, lighting, and surface to create detailed environments. Prerequisite: DFTG 1441 or ARTV 1440 or department chair approval. (4:3-3)

DFTG 2458 Advanced Machine Design (151306)

This course develops design process skills for the production of a complete design package, which includes jig and fixture design, extrusion dies, and injection mold design. Prerequisite: DFTG 2406 or department chair approval. (4:3-3)

Note: See Engineering Section for courses which have ENGR prefixes.

ENGL 0306 Beginning Writing Skills (3201085335)

(Formerly Special Services 136, DEVS 1306)

This course is designed for systematic study and review of acceptable grammatical forms and proper punctuation in a gradual progression from sentence structure to paragraph writing. The course offers opportunities to develop basic writing skills and to enhance critical thinking. The course includes one hour of lab weekly. This course is not applicable to any degree. Prerequisite: Writing level 4. (3:3-1)

ENGL 0307 Preparation for College English (3201085335)

(Formerly Basic English, English 137, 1301)

This course is a comprehensive review of the fundamentals of composition and grammar with emphasis on paragraph writing, beginning theme construction, and mechanical and syntactical correctness. It provides students with opportunities to develop critical reading and writing skills through reading and discussing the works of professional writers. This course is not applicable to any degree. Prerequisite: A grade of C or above in ENGL 0306 or Writing level 6. (3:3-0)

ENGL 0308 Writing and Grammar: English for Speakers of Other Languages (3201085335)

This course reviews the fundamentals of composition and grammar with emphasis on logical paragraph and essay construction, clear and idiomatic English, appropriate syntactical features, and mechanical correctness. In addition, the course provides for the development of critical reading, thinking, writing, and speaking skills through the analysis and discussion of professional essays. Laboratory sessions provide group and individual practice with a variety of second language problem areas. This course is not applicable to any degree. Prerequisite: A grade of C or above in ENGL 0306 or Writing level 6. (3:3-1)

ENGL 1111 Creative Writing Workshop (2305015112)

(Formerly English 111)

This composition course is designed for students interested in practicing and criticizing artistic expression through writing. The course also provides experience in producing San Jacinto College's literary magazines. The course may be taken a maximum of six times for credit. Prerequisite: Writing level 7. (1:1-0)

Course Descriptions

ENGL 1301 Composition I (2304015112)

(Formerly English 131, ENGL 1311)

Students are given extensive practice in reading and writing expository and argumentative prose. Various elements of composition, such as logical organization, effective diction, and complete and varied development are stressed. A formal research paper is required. Prerequisite: A grade of C or above in ENGL 0307 or Reading level 7 and Writing level 7. (3:3-0)

ENGL 1302 Composition II (2304015112)

(Formerly English 132, ENGL 1312)

A continuation of English 1301, this course extends the writing and critical reading and thinking skills developed in composition I through the careful reading of major literary genres and the preparation of critical and analytical writing assignments. Research writing is required. Prerequisite: ENGL 1301. (3:3-0)

ENGL 1303 Honors Composition I (2304015112)

(Formerly ENGL 1313)

This course is designed for students who have strong backgrounds in composition and who make high scores on an English placement test. Assignments in the course emphasize reading and writing skills, argumentation, the informal essay, and the research paper. Prerequisites: Writing level 9 and recommendation of department chair. A student may not receive credit for both ENGL 1301 and ENGL 1303. (3:3-0)

ENGL 1304 Honors Composition II (2304015112)

(Formerly ENGL 1314)

A continuation of English 1303 this course extends a student's skills in reading and writing critically by introducing him/her to works of literature that represent various genres. Students will write a number of short papers analyzing ideas and concepts from the works they read. A documented study on a single author or a significant theme represented in a number of works will be required. Examinations and quizzes may also be a part of the semester grade. Prerequisite: ENGL 1303 or ENGL 1301 with a nomination by the department chair. A student may not receive credit for both ENGL 1302 and ENGL 1304. (3:3-0)

ENGL 2307 Creative Writing (2305015112)

This elective composition course provides an opportunity for students to create imaginative works for pleasure and publication within the supportive atmosphere of a writing workshop. The workshop may emphasize a single genre, such as poetry, fiction, or drama. Alternatively, the workshop may allow individual students to write original compositions in genres of their interest in response to classroom assignments. Students analyze significant contemporary literature, finding models of successful forms and effective technique. In addition, they critique the work of classmates. Literary theory and strategies for publication are discussed. Students are also encouraged to participate as editors of the College literary magazines and to submit their best work for publication. This three-credit-hour course may be taken once for college credit. A student may elect a maximum of six hours of creative writing courses for college credit (English 1111, English 2307, and English 2308). English 2307 may also be taken through Continuing Education as a non-credit course. Prerequisite: Writing level 7. (3:3-0)

ENGL 2308 Creative Writing Studies (2305015112)

This elective composition course provides an opportunity for students to create imaginative works for pleasure and publication within the supportive atmosphere of a writing workshop. The workshop may emphasize a single genre, such as poetry, fiction, or drama. Alternatively, the workshop may allow individual students to specialize on projects longer than those typically covered in English 2307 within such literary areas as personal and narrative essay, poetry, prose fiction or drama. Students analyze significant contemporary literature, finding models of successful forms and effective techniques. Additionally, students critique the work of classmates. Literary theory and strategies for publication are discussed. Students are also encouraged to participate as editors of the College literary magazines and to submit their best work for publication. This three-credit-hour course may be taken once for college credit. A student may elect a maximum of six hours of creative writing courses for college credit (English 1111, English 2307, and English 2308). English 2308 may also be taken through Continuing Education as a non-credit course. Prerequisite: ENGL1301. (3:3-0)

ENGL 2311 Technical Report Writing (2311015112)

(Formerly English 234, ENGL 2314)

This course applies the principles of composition to actual writing situations in technical areas, stressing correctness and effectiveness in a variety of report forms, including an investigative paper on a technical topic. Prerequisite: ENGL 1301. (3:3-0)

ENGL 2322 A Survey of Early British Literature: The Anglo- Saxon Age Through the Neo- Classical Age (2308015112)

(Formerly English 231, ENGL 2311)

This course offers opportunities for reading and discussing the works of major British writers as well as significant events and persons in cultural history. Students complete a variety of writing assignments including essay examinations, short compositions, and investigative papers. Prerequisite: ENGL 1302. (3:3-0)

ENGL 2323 A Survey of Later British Literature: The Romantic Age Through the Present Age (2308015112)

(Formerly English 232, ENGL 2312)

This course offers opportunities for reading and discussing the works of major Romantic, Victorian, and modern British writers as well as significant events and personalities in the development of cultural history from the late eighteenth century to the present. Students complete a variety of writing assignments including essay examinations, short compositions, and investigative papers. Prerequisite: ENGL 1302. (3:3-0)

ENGL 2327 A Survey of Early American Literature (2307015112)

(Formerly ENGL 2326)

This course offers opportunities for discussing and reading works by major American writers from the Puritan period through the Romantic period, making an effort to identify those themes and literary forms which are characteristic of the American heritage. Students complete a variety of writing assignments including essay examinations, short critical compositions, and investigative papers. Prerequisite: ENGL 1302. (3:3-0)

ENGL 2328 A Survey of Later American Literature (2307015112)

(Formerly ENGL 2326)

This course offers opportunities for discussing and reading works by major American writers from the Realistic/Naturalistic period to the present, making an effort to identify those themes and literary forms which are characteristic of the American heritage. Students complete a variety of writing assignments including essay examinations, short critical compositions, and investigative papers. Prerequisite: ENGL 1302. (3:3-0)

ENGL 2332 A Survey of Early World Literature (1601045213)

(Formerly ENGL 2315)

By reading, discussing, and writing about works of selected writers from a number of cultures from ancient times to the eighteenth century, the student will become aware of the diverse ways in which human beings have attempted to understand themselves and their relationship to nature, art, the supernatural, and society. The course is especially relevant to students majoring in humanities or human studies. Students complete a variety of writing assignments including essay examinations, short compositions, and investigative papers. Prerequisite: ENGL 1302. (3:3-0)

ENGL 2333 A Survey of Later World Literature (1601045213)

(Formerly ENGL 2316)

A continuation of English 2332, this course offers opportunities for the discussion of writers representing many cultures from the Eighteenth Century to the present. This course is especially relevant to students majoring in humanities or human studies. Students complete a variety of writing assignments including essay examinations, short compositions, and investigative papers. Prerequisite: ENGL 1302. (3:3-0)

ENGL 2341 Literature and Film (1601045113)

The study of one or more literary genres including, but not limited to, fiction, drama and film. The course offers an analytical approach to both literature and film. Through various methods, students will learn conceptual frameworks and vocabulary for understanding and explaining how films and literature enhance our perception of society, and inform our awareness and judgment. The course strives to help students critically approach culture by analyzing literary works. Prerequisite: ENGL 1302. (3:3-0)

ENGL 2351 Mexican-American Literature (0502035525)

A survey of Mexican-American/Chicano/a literature including fiction, non-fiction, poetry, and drama. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

ENGL 2370 Selected Studies in Literature (2303015335)

This course offers students opportunities for intensive analysis of literary works that may be unified by theme, period, or subject matter. Students complete a variety of writing assignments including essay examinations, short compositions, and investigative papers. The course may be repeated a maximum of two times for transfer credit, provided the repeated course covers a different topic. Prerequisite: ENGL 1302 (3:3-0)

English for Speakers of Other Languages

ESOL 0311 Introductory Listening and Speaking (3201085512)

This course focuses on developing basic social and pre-academic speaking and listening skills which include pronouncing, describing, giving directions, and comprehending oral directions. This course does not apply toward any degree. Prerequisite: Standardized test of English language proficiency. (3:3-0)

ESOL 0312 Intermediate Listening and Speaking (3201085512)

This course is designed for students with some English skills who want to increase their listening, speaking, and writing communication skills. This course does not apply toward any degree. Prerequisite: Completion of ESOL 0311 with a grade of C or better or minimum score on a standardized test of English language proficiency. (3:3-0)

ESOL 0313 Advanced Listening and Speaking (3201085512)

This course develops public and academic oral language skills through active participation in group activities. Rhetorical skills such as narration and description are practiced. This course does not apply toward any degree. Prerequisite: A grade of C or better in ESOL 0312 or minimum score on a standardized test of English language proficiency. (3:3-0)

ESOL 0321 ESOL Introductory Reading (3201085612)

This course is designed for the non-native speaker. It focuses on English language development through reading activities such as comprehension and vocabulary. This course does not apply toward any degree. Prerequisite: Standardized test of English language proficiency. (3:3-0)

ESOL 0322 ESOL Intermediate Reading (3201085612)

This course continues language development through reading comprehension, vocabulary building, and paragraph organization. This course can be taken with other skill areas of ESOL. This course does not apply toward any degree. Prerequisite: A grade of C or better in ESOL 0321 or minimum score on a standardized test of English language proficiency. (3:3-0)

ESOL 0323 Advanced Reading (3201085612)

This course continues language development through reading comprehension, vocabulary building, and adapting reading rate for different purposes. This course can be taken with other skill areas of ESOL. This course does not apply toward any degree. Prerequisites: A grade of C or better in ESOL 0322 or minimum score on a standardized test of English language proficiency. (3:3-0)

ESOL 0331 Introductory Writing and Grammar (3201085712)

This course helps students learn to comprehend and use the basic structures of English and perform simple writing tasks such as using complete sentences, filling out forms, writing invitations, and communicating through short notes. This course does not apply toward any degree. Prerequisite: Standardized test of English language proficiency. (3:3-0)

ESOL 0332 Intermediate Writing and Grammar (3201085712)

This course introduces the development of controlled and guided paragraphs using a variety of organizational structures, logic patterns, and basic grammar. This course does not apply toward any degree. Prerequisite: A grade of C or better in ESOL 0331 or minimum score on standardized test of English language proficiency. (3:3-0)

Course Descriptions

ESOL 0333 Advanced Writing and Grammar (3201085712)

This course stresses the process of paragraph writing and the characteristics of effective paragraphs. Students learn how to write controlled essays, to develop and support opinions, and to write introductions and conclusions. This course does not apply toward any degree. Prerequisite: A grade of C or better in ESOL 0332 or minimum score on a standardized test of English language proficiency. (3:3-0)

ESOL 0351 Introductory Composition for Non-Native Speakers (3201085412)

This course is designed for non-native students who need to master the rhetorical modes for academic and professional English writing and reading situations. This course introduces them to essays, short stories, and poetry. This course does not apply toward the associate degree. Prerequisite: Standardized test of English language proficiency. (3:3-0)

ESOL 0352 Intermediate Composition for Non-Native Speakers (3201085412)

This course is designed for non-native speakers who have taken ESOL 0351 and need to master the rhetorical modes for academic and professional English writing and reading situations. This course does not apply toward the associate degree. Prerequisites: Completion of ESOL 0351 with a grade of C or better or minimum score on standardized test of English language proficiency. (3:3-0)

ESOL 0353 Advanced Composition for Non-Native Speakers (3201085412)

This course is designed for non-native speakers who have taken ESOL 0352 and need to master the rhetorical modes for academic and professional English writing and reading situations and learn to recognize the different uses of language. This course does not apply toward the associate degree. Prerequisite: Completion of ESOL 0352 with a grade of C or better or minimum score on standardized test of English language proficiency. (3:3-0)

Fire Protection Technology

FIRS 1301 Firefighter Certification I (430203)

This is an introduction to firefighter safety and development. Topics include Texas Commission on Fire Protection Rules and Regulations, firefighter safety, fire science, personal protective equipment, self-contained breathing apparatus, and fire reports and records. Thirty-two lecture hours. Forty-eight hours of skills development. Firefighter Training Academy. Prerequisite: Reading level 6. Co-requisite: FIRS 1301, FIRS 1313, FIRS 1319, FIRS 1329, FIRS 1407, FIRS 1423, FIRS 1433, and PHED 1119. (3:2-3)

FIRS 1313 Firefighter Certification III (430203)

This course teaches general principles of fire apparatus, pump operations, fire streams, and public operations as they relate to fundamental development of basic firefighter skills. Forty-eight lecture hours. Sixteen hours of skills development. Firefighter Training Academy. Prerequisite: Reading level 6. Co-requisites: FIRS 1301, FIRS 1313, FIRS 1319, FIRS 1329, FIRS 1407, FIRS 1423, FIRS 1433, and PHED 1119. (3:3-1)

FIRS 1319 Firefighter Certification IV (430203)

This is a study of equipment, tactics and procedures used in forcible entry, ventilation, salvage, and overhaul. It is preparation for certification as a basic firefighter. Thirty-two lecture hours. Thirty-two hours of skills development. Firefighter Training Academy. Prerequisite: Reading level 6. Co-requisite: FIRS 1301, FIRS 1313, FIRS 1319, FIRS 1329, FIRS 1407, FIRS 1423, FIRS 1433, and PHED 1119. (3:2-2)

FIRS 1329 Firefighter Certification VI (430203)

This is a study of fire inspection techniques and practices, public transportation, and fire cause determination. Topics include fire protection systems, wild land fire, and pre-incident planning. It is preparation for certification as a basic firefighter. Forty-eight hours lecture hours. Sixteen hours of skills development. Firefighter Training Academy. Prerequisite: Reading level 6. Co-requisite: FIRS 1301, FIRS 1313, FIRS 1319, FIRS 1329, FIRS 1407, FIRS 1423, FIRS 1433, and PHED 1119. (3:3-1)

FIRS 1407 Firefighter Certification II (430203)

This course focuses on the study of basic principles and skill development in handling fire service hose and ladders. Topics include the distribution system of water supply; basic building construction; and emergency service communication, procedures, and equipment. Thirty-two lecture hours. Sixty-two hours of skills development. Firefighter Training Academy. Prerequisite: Reading level 6. Co-requisites: FIRS 1301, FIRS 1313, FIRS 1319, FIRS 1329, FIRS 1407, FIRS 1423, FIRS 1433, and PHED 1119. (4:2-5)

FIRS 1423 Firefighter Certification V (430203)

This study of ropes and knots, rescue procedures and techniques, and hazardous materials is preparation for certification as a basic firefighter. Forty-eight hours lecture hours. Forty-eight hours of skills development. Firefighter Training Academy. Prerequisite: Reading level 6. Co-requisite: FIRS 1301, FIRS 1313, FIRS 1319, FIRS 1329, FIRS 1407, FIRS 1423, FIRS 1433, and PHED 1119. (4:3-3)

FIRS 1433 Firefighter Certification VII (430203)

This course provides in-depth study and practice of simulated emergency operation and hands-on live fire training exercises, incident command procedures, and combined operations using proper extinguishing methods. Emphasis on safety. Thirty-two lecture hours. Sixty-two hours of skills development. Firefighter Training Academy. Prerequisite: Reading level 6. Co-requisite: FIRS 1301, FIRS 1313, FIRS 1319, FIRS 1329, FIRS 1407, FIRS 1423, FIRS 1433, and PHED 1119. (4:2-5)

FIRT 1303 Fire and Arson Investigation I (430202)

This in-depth study of basic fire and arson investigation practices, emphasizes fire behavior principles related to fire cause and origin determination. Forty-eight lecture hours. Sixteen hours of skills development. (3:3-1)

FIRT 1309 Fire Administration I (430202)

This is an introduction to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis on fire service leadership from the perspective of the company officer. Forty-eight lecture hours. (3:3-0)

Course Descriptions

FIRT 1315 Hazardous Materials I (430203)

In this study of the chemical characteristics and behavior of various materials, topics include storage, transportation, handling hazardous emergency situations, and the most effective methods of hazard mitigation. This course is equivalent to hazardous materials operations level training. Forty-eight lecture hours. Sixteen hours of skills development. (3:3-1)

FIRT 1319 Firefighter Health and Safety (430201)

In this study of firefighter occupational safety and health in emergency and non-emergency situations, students identify and describe components of a firefighter safety and health program; explain safety practices and procedures related to emergency and non-emergency operations; and outline the components of a firefighter wellness program. Forty-eight lecture hours. (3:3-0)

FIRT 1327 Building Construction for the Fire Service (430201)

(Formerly FIRT 1329)

This is an exploration of building construction and design related to fire spread suppression in various structures. It examines potential hazards resulting from construction practices and materials. Students identify types of building construction; recognize hazards associated with construction practices; identify fire resistive levels of building materials; and recognize signs of potential structural collapse. Forty-eight lecture hours. (3:3-0)

FIRT 1338 Fire Protection Systems (430202)

This is a study of fire detection, alarm, and extinguishing systems. Forty-eight lecture hours. (3:3-0)

FIRT 1345 Hazardous Materials II (430203)

This is an in-depth study of mitigation practices and techniques to effectively control hazardous material spills and leaks. This course is equivalent to hazardous materials technician level training. Forty-eight lecture hours. Sixteen hours of skills development. (3:3-1)

FIRT 1349 Fire Administration II (430201)

This is an in-depth study of fire service management as it pertains to budgetary requirements, administration, organization of divisions within the fire service, and relationships between the fire service and outside agencies. Prerequisite: FIRT 1309. Forty-eight lecture hours. (3:3-0)

FIRT 1370 Technical Rope Rescue (430201)

This in-depth study of technical rope rescue includes extensive skills development. Upon successful completion of this course students should be able to identify, describe, and demonstrate rope rescue and confined space rescue procedures at the technician level. The content of this course meets and/or exceeds the job performance requirements specified in NFPA 1006 Rescue Technical Professional Qualifications, including the specialty areas of rope rescue and confined space rescue. (3:2-3)

FIRT 1408 Fire Inspector I (430202)

This course focuses on fire inspection including rules, codes, and field inspection practices to meet certification requirements of the Texas Commission on Fire Protection. Students select and limit applicable rules and regulations; select and apply appropriate codes; list different type of construction and allowable occupancy classifications; and describe building service equipment and processes. They also describe and list possible hazards; list different types of fire protection systems and water supplies; and demonstrate field proficiency in inspection practices. This course meets and/or exceeds Texas Commission on Fire Protection requirements for certification to fire inspector I. (4:3-3)

FIRT 1440 Fire Inspector II (430202)

This course focuses on fire inspection rules, procedures, and inspection practices to meet the Texas Commission on Fire Protection requirements for fire inspector II. Students process a permit applying the appropriate codes, rules, hazard identification processes, building processes, emergency plans, and fire protection systems. This course meets and/or exceeds Texas Commission on Fire Protection requirements for certification to fire inspector II. (4:3-3)

FIRT 2331 Firefighting Strategies and Tactics II (430202)

This continuation of firefighting strategies and tactics I emphasizes use of incident command in large-scale command problems and other specialized fire problems. Prerequisite: FIRT 1331. Forty-eight lecture hours. (3:3-0)

FIRT 2305 First Instructor I

(Formerly FIRT 1355)

Preparation of fire and emergency services personnel to deliver instruction from a prepared lesson plan. Includes the use of instructional aids and evaluation instruments to meet the Texas Commission on Fire Protection requirements for fire instructor I certification. Forty-eight lecture hours. (3:3-0)

FIRT 2309 Firefighting Strategies and Tactics I (430201)

(Formerly FIRT 1331)

Analysis of the nature of fire problems and selection of initial strategies and tactics including an in-depth study of efficient and effective use of manpower and equipment to mitigate the emergency. Forty-eight lecture hours. (3:3-0)

FIRT 2333 Fire and Arson Investigation II (430201)

In this continuation of fire and arson investigation I, topics include reports, courtroom demeanor, and expert witnesses. Forty-eight lecture hours. Sixteen hours of skills development. (3:3-1)

FIRT 2345 Hazardous Materials III (430203)

In this continuation of hazardous materials II, topics include radioactive materials and radiation; poisons and toxicology; cryogenics; oxidizers; corrosives; flammable solids; hazards of Class A fuels, plastics and organic and inorganic peroxides and water reactivity; and polymerization and polymerizing substances. Forty-eight lecture hours. Sixteen hours of skills development. (3:3-1)

FIRT 2351 Company Fire Officer (430202)

This capstone course covers fire ground operations and supervisory practices. Includes performance evaluation of incident commander, safety officer, public information officer, and shift supervisor duties. Forty-eight lecture hours. (3:3-0)

Foreign Languages

CHIN 1411 Beginning Chinese I (1603015113)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. This course is an introduction to the Mandarin Chinese language in written and spoken form. Students will spend three hours a week learning language patterns and forms and two hours a week in lab activities. Students who have successfully completed two years of Chinese in high school may, with department chair approval, begin with CHIN 1412. However, students should be aware that some degrees require two semesters of beginning Chinese. Prerequisite: Reading level 6. (4:3-2)

Course Descriptions

CHIN 1412 Beginning Chinese II (1603015113)

Fundamental skills in listening comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. This course is the second half of an introduction to Mandarin Chinese language in written and spoken form. Students will spend three hours a week learning language patterns and forms and two hours a week in lab activities. Students who have successfully completed two years of Chinese in high school may, with department chair approval, begin with CHIN 1412. However, students should be aware that some degrees require two semesters of beginning Chinese. Prerequisite: CHIN 1411. (4:3-2)

CHIN 2311 Intermediate Chinese I (1603015113)

Review and application of skills in listening comprehension, speaking, reading and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture. This course is designed to give the student who has completed CHIN 1411 and CHIN 1412 increased fluency and confidence in the use of the Chinese language. Although no lab is scheduled, students will have access to tapes and other lab materials and will be encouraged to use these supplemental learning tools. Prerequisite: CHIN 1412. (3:3-0)

CHIN 2312 Intermediate Chinese II (1603015113)

Review and application of skills in listening comprehension, speaking, reading and writing. Emphasizes conversation, vocabulary acquisition, reading, composition, and culture. This course is a continuation of CHIN 2311. Although no lab is scheduled, students will have access to tapes and other lab materials and will be encouraged to use these supplemental learning tools. Prerequisite: CHIN 2311. (3:3-0)

FREN 1411 Beginning French I (1609015113)

(Formerly French 145)

This course is an introduction to the French language in written and spoken form. Students will spend three hours a week learning language patterns and forms and two hours a week in lab activities. Students who have successfully completed two years of French in high school may, with department chair approval, begin with FREN 1412. However, students should be aware that some degrees require two semesters of beginning French. Prerequisite: Reading level 6. (4:3-2)

FREN 1412 Beginning French II (1609015113)

(Formerly French 146)

This course continues the introduction to the French language begun in French 1411. Students who have had two or more years of French in high school, or can demonstrate adequate proficiency, may begin with this course, provided they have approval from the department chair. Students will spend three hours a week learning language patterns and forms and two hours a week in lab activities. Prerequisite: FREN 1411. (4:3-2)

FREN 2311 Intermediate French I (1609015213)

(Formerly French 235, 2313)

This course is designed to give the student who has completed French 1411 and 1412 increased fluency and confidence in the use of the French language. Although no lab is scheduled, students have access to tapes and other lab materials and are encouraged to use these supplemental learning tools. Prerequisites: FREN 1411-1412. (3:3-0)

FREN 2312 Intermediate French II (1609015213)

(Formerly French 236, 2314)

This course is a continuation of French 2311. Although no lab is scheduled, students have access to tapes and other lab materials and are encouraged to use these supplemental learning tools. Prerequisite: FREN 2311. (3:3-0)

GERM 1411 Beginning German I (1605015113)

(Formerly German 143)

This course is an introduction to the German language in written and spoken form. Students spend three hours a week learning language patterns and forms and two hours a week in lab activities. Students who have successfully completed two years of German in high school may, with the department chair approval, begin with GERM 1412. However, students should be aware that some degrees require two semesters of beginning German. Prerequisite: Reading level 6. (4:3-2)

GERM 1412 Beginning German II (1605015113)

(Formerly German 144)

This course continues the introduction to the German language begun in German 1411. Students who have had two or more years of German in high school, or can demonstrate adequate proficiency, may begin with this course, provided they have approval from the department chair. Students spend three hours a week learning language patterns and forms and two hours a week in lab activities. Prerequisite: GERM 1411. (4:3-2)

GERM 2311 Intermediate German I (1605015213)

(Formerly German 233, 2313)

This course is designed to give the student who has completed German 1411 and 1412 increased fluency and confidence in the use of the German language. Although no lab is scheduled, students have access to tapes and other lab materials and are encouraged to use these supplemental learning tools. Prerequisites: GERM 1411-1412. (3:3-0)

GERM 2312 Intermediate German II (1605015213)

(Formerly German 232, 2314)

This course is a continuation of German 2311. Although no lab is scheduled, students will have access to tapes or other lab materials and are encouraged to use these supplemental learning tools. Prerequisite: GERM 2311. (3:3-0)

SPAN 1411 Beginning Spanish I (1609055113)

(Formerly Spanish 141)

This course is an introduction to the Spanish language in written and spoken form, enabling a beginning student to lay foundations for later study. Students spend three hours a week learning language patterns and forms and two hours a week in lab activities. Students who have successfully completed two years of Spanish in high school may, with the department chair approval, begin with SPAN 1412. However, students should be aware that some degrees require two semesters of beginning Spanish. Prerequisite: Reading level 6. (4:3-2)

SPAN 1412 Beginning Spanish II (1609055113)

(Formerly Spanish 142)

This course continues the introduction to the Spanish language begun in Spanish 1411. Students who have had two or more years of Spanish in high school or can demonstrate adequate proficiency may begin with this course, provided they have approval from the department chair. Prerequisite: SPAN 1411. (4:3-2)

SPAN 1415 Essentials of Spanish for Health Vocations (1609055413)

(Formerly Spanish 140, 1401)

This course requires intensive practice in basic grammar, pronunciation, reading and simple conversation; emphasis is on medical terminology. This course cannot be substituted for SPAN 1411. (4:3-2)

SPAN 2311 Intermediate Spanish I (1609055213)

(Formerly Spanish 231, 2313)

This course is designed to give the student who has completed Spanish 1411 and 1412 increased fluency and confidence in the use of the Spanish language. Although no lab is scheduled, students have access to tapes and other lab materials and are encouraged to use these supplemental learning tools. Prerequisites: SPAN 1411-1412. (3:3-0)

SPAN 2312 Intermediate Spanish II (1609055213)

(Formerly Spanish 232, SPAN 2314)

This course is a continuation of Spanish 2311. Although no lab is scheduled, students will have access to tapes and other lab materials and are encouraged to use these supplemental learning tools. Prerequisite: SPAN 2311. (3:3-0)

SPAN 2316 Spanish on the Job I (1609055413)

(Formerly Spanish 233)

The primary purpose of this course is to give students an opportunity to develop an accurate oral use of the language (in simulated on-the-job situations), based on a sound understanding of structure. Reading will be incidental to the oral objective. Prerequisite: Eight hours of Spanish or approval. (3:3-0)

SPAN 2317 Spanish on the Job II (1609055413)

(Formerly Spanish 234)

This course has the same objectives as SPAN 2316 but utilizes different simulated on-the-job situations. Prerequisite: Eight hours of Spanish or approval. (3:3-0)

Geographic Information Science (GIS)

Program not offered after Summer 2010

CRTG 1301 Cartography and Geography in Geographical Information Systems (GIS) and Global Positioning Systems (GPS) (450702)

In this introduction to the principles of cartography and geography, emphasis is on global reference systems and the use of satellites for measurements and navigation. Prerequisite: CRTG 1311 or department chair approval. (3:2-2)

CRTG 1311 Introduction to Geographic Information Systems (GIS) (450702)

This is an introduction to basic concepts of vector GIS, using several industry-specific software programs, and to the nomenclature of cartography and geography. Prerequisite: Basic knowledge of computers and Windows environment. (3:2-2)

CRTG 1321 Introduction to Raster-Based Geographic Information Systems (Cartography) (GIS) (450702)

This course provides instruction in GIS data sets including raster-based information such as images or photographs, acquisition of such data, and processing and merging with vector data. Prerequisite: CRTG 1311 or department chair approval. (3:2-2)

CRTG 2301 Data Acquisition and Analysis in Geographic Information Systems (Cartography) (GIS) (450702)

This is a study of the management of geographic information, system life cycles, and the cost/benefit ratio. Topics include demographic management and institutional issues such as data providers, data management, combination of attribute and graphical data, information storage and access, Texas and national standards for spatial data; and applications GIS for demographic modeling and analysis. Prerequisite: CRTG 1311, or department chair approval. (3:2-2)

CRTG 2311 Workplace Geographic Information Systems (Cartography) (GIS) (450702)

This course focuses on application of GIS technology to real workplace situations from public and private sectors. Completion of Global Positioning Systems (GPS) fieldwork is required for lab exercises. Prerequisite: CRTG 1311 or department chair approval. (3:2-2)

CRTG 2380 Cooperative Education Cartography (GIS) (450702)

Career-related activities encountered in GIS are offered through cooperative agreements among the College, employer, and student. Under supervision of the College and the employer, the student combines classroom learning with work experience. Prerequisite: CRTG 1301, CRTG 1311, and CRTG 1321. (3:1-20)

Geography

GEOG 1301 Physical Geography (4507015125)

This is a study of climate, vegetation, soils, and landforms from a locational perspective with an emphasis on map skills. The role of humans in altering their environment is considered, especially the human impact on climate and vegetation. Other topics include the study of latitude and longitude; time zones; earth-sun relationships and the changing seasons; and severe weather, such as hurricanes and tornadoes. (Geography 1301 may satisfy the geography requirements for elementary education majors. Check with the counseling center.) Prerequisite: Reading level 6. (3:3-0)

GEOG 1302 Cultural Geography (4507015125)

This course introduces students to the study of where and why people and activities are located on the earth's surface. Geographic concepts include spatial organization of economic, social, political, and perceptual environments in an increasingly interrelated world community. Prerequisite: Reading level 6. (3:3-0)

GEOG 1303 World Geography (4507015325)

(Formerly Geography 231, GEOG 2311)

This survey of world regions and the geographical factors that shape them, includes basic geography concepts; world population trends; regional economic, political, language and religious characteristics; topography, vegetation, and climate of regions; the world food problem; economic development; non-industrial cultures and cultural change; and geopolitical analysis. Prerequisite: Reading level 6. (3:3-0)

Geology

GEOL 1403 Physical Geology (4006015103)

(Formerly Geology 141, GEOL 1411)

This is an introduction to the scope of geology, the concepts involved, the several branches of the science, and the economics and cultural aspects of the science. Emphasis on the physical makeup of the earth and the processes modifying the earth's crust. Prerequisite: Reading level 6. (4:3-3)

Course Descriptions

GEOL 1404 Historical Geology (4006015103)

(Formerly Geology 142, GEOL 1412)

In this introduction to the principles of sedimentology, stratigraphy, and paleontology, subject matter covers the major geologic changes that have occurred in earth history in their chronological order, including diastrophism, eustatic fluctuations, and erosion and its effects including the deposition of new strata, and organic evolution. Prerequisite: Reading level 6. (4:3-3)

GEOL 1405 Environmental Geology (0301025301)

This is an overview of the effects of geological processes combined with natural forces and human activity on the global environment. Specific topics include volcanism, earthquakes, natural resources, waste disposal, coastal processes, surface and groundwater pollution, subsidence, and faulting. Field trip(s) are required. Prerequisite: GEOL 1403 or GEOL 1404. (4:3-3)

GEOL 1447 Meteorology (0301025301)

Meteorology is a one-semester survey course in meteorology, intended for both science and non-science majors. The course covers a broad range of topics within the atmospheric sciences at an introductory level and includes laboratory activities. It will provide the student with a general understanding of the Earth's atmosphere and its behavior. Course objectives include being able to identify and explain observed weather phenomena, being able to describe the structure, composition, and dynamics of the atmosphere, being able to describe the reasons our atmosphere is different from atmospheres of other planets and how our atmosphere has changed and can change. This course should provide a deeper appreciation of the forces acting and motions occurring in the atmosphere to produce various weather and climate conditions. Prerequisites: Reading level 7; Writing level 7; Math level 9, Math 1314. (4:3-3)

Gerontology Services

GERS 1301 Introduction to Gerontology (301101)

This is an overview of the social, psychological, and biological changes that accompany aging and the implications of these changes for the individual, as well as for the larger society. Prerequisite: Reading level 4 (3:3-0)

GERS 1303 Fitness and Wellness for Aging Populations (301101)

This course on healthy aging and wellness promotion for the older adult includes an overview of the aging process and its effect on major body systems. It also addresses various wellness practices, including lifestyle changes and exercise/nutrition planning, and emphasizes issues involving attitude and social interaction, as well as recommendations for home safety and personal security. Projects in wellness planning and resource location are discussed. Prerequisite: Reading level 4 (3:3-1)

GERS 1345 Policies & Programs for Older Adults (190702)

This course identifies public policies and the resulting programs and services designed to address issues related to aging. Emphasis on maintaining independent living in the community for the elderly. Prerequisite: Reading level 4 (3:3-0)

GERS 1351 Sociology of Aging (301101)

This course focuses on the impact of aging on the larger society, including responses of various social institutions to the aged, as well as the impact of an aging population on those institutions. It emphasizes the changing roles of the aged and the cultural attitudes toward the elderly. Prerequisite: Reading level 4 (3:3-0)

GERS 1402 Directing Activities in Long-Term Care Environments (190702)

This course explores the role of the activity director in long-term care facilities across the continuum of care. Topics include the assessment of client needs, development of care plans, design of programs using therapeutic recreation techniques, and the supervision of recreation personnel. Prerequisite: Reading level 4. (4:3-3)

GERS 2330 Issues of Long-Term Care (190702)

This course is an exploration of current information regarding a variety of long-term care settings for the elderly. Prerequisite: Reading level 4 (3:2-2)

GERS 2331 Contemporary Issues in Aging (301101)

This study of the impact of current issues related to aging emphasizes evidence-based practices involving current research focusing on the local region. Prerequisite: GERS 1301 or instructor approval (3:3-0)

GERS 2333 Legal and Ethical Issues in Aging (190702)

In this exploration of the legal and ethical issues that families must consider as family members age, emphasis is on advocacy for the elderly in providing legal and financial well-being as well as knowledge regarding the access of social and medical programs for the elderly. Prerequisite: Reading level 4. (3:3-0)

GERS 2360 Clinical-Gerontology (301101)

This is a health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by a clinical professional. Prerequisite: 24 credit hours of certificate courses (GERS, HITT 1305, ITSC 1309). (3:0-18)

GERS 2366 Practicum-Gerontological Services (190702)

This course offers practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and student. Prerequisite: 24 credit hours of certificate courses (GERS, HITT 1305, ITSC 1309). (3:0-21)

GERS 2371 Fundamental Applications of Long-Term Care (190702)

This course gives a thorough view of the role of various positions in the administrative structure in long-term care environments in the continuum of care. It examines the administrative structure in all types of continuous care facilities, and describes each department's responsibilities, and defines to whom those departmental personnel report. Topics include the explanation of the different departments within a long-term care facilities, the personnel needs and how the individual departments work together to meet state, local and federal regulations. The course includes management theory, supervision, labor and public relations, Medicare, Medicaid, insurance liability, communications, employee training and motivation, and employer-employee relationships. The course is designed to help students develop a keen awareness in quality indicators, and an understanding of how policies and procedures promote the common good of all in the long-term care environment. Prerequisite: 21 credit hours of certificate courses (GERS, HITT 1305, ITSC 1309). (3:3-0)

Government

GOVT 2301 United States and Texas Politics and Constitutions (4510025125)

(Formerly Government 234, GOVT 2314)

This course is an introductory survey of the United States and Texas political systems. Topics include a theoretical study of the discipline of political science, democratic and authoritarian systems, historical and environmental factors, the United States and Texas Constitutions, federalism and local units of government, public opinion, voting behavior, the electoral system, interest groups, and political parties. (Government 2301 satisfies the Legislative requirement of a course emphasizing the United States and Texas Constitutions.) The College recommends that a student earn a minimum of six hours of credit in history before taking government. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

GOVT 2302 United States and Texas Government Institutions: Legislative, Executive and Judicial Branches (4510025125)

(Formerly Government 235, GOVT 2315)

This course is an introductory survey of United States and Texas political systems. Topics include the executive, legislative, and judicial branches of government at both national and state levels. Other areas of investigation are civil rights, civil liberties, and criminal justice, as well as economic, social, regulatory, foreign, and defense policy. The College recommends that a student earn a minimum of six hours of credit in history before taking government. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

GOVT 2304 Introduction to Political Science (4510015225)

This introductory survey of the discipline of political science focuses on the history, scope, and methods of the field, and the substantive topics in the discipline. Prerequisites: GOVT 2301 and GOVT 2302. (3:3-0)

GOVT 2311 Mexican-American Politics (0502035425)

The study of Mexican-American/Chicano/a politics within the American political experience. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

Health Information Management

HITT 1260 Clinical-Medical Billing (510707)

This advanced health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and gain experience managing the workflow in a clinical setting. Prerequisites: MDCA 1343, HITT 1370, HITT 1341, HITT 2346. (2:0-8)

HITT 1301 Health Data Content and Structure (510707)

This is an introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health-related information. It offers instruction in delivery and organizational structure. Topics include content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens. Prerequisites: Reading level 4, Writing level 4. (3:3-0)

HITT 1305 Medical Terminology (510707)

(Formerly OFAD 1372, POFM 1313)

This is a study of word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations, and symbols as related to surgical procedures, medical specialties, and diagnostic procedures. Prerequisites: Reading level 4, Writing level 4. (3:3-0)

HITT 1307 Cancer Data Management I (510707)

(Formerly HITT 1372)

This introduction to cancer data management includes cancer program requirements, the American College of Surgeons Cancer Program Survey process, and data collection/retrieval-abstracting, coding, staging, and reporting. Prerequisites: HITT 1305, HITT 1374, HPRS 2301. (3:3-0)

HITT 1341 Coding and Classification Systems (510703)

This course focuses on application of basic coding rules, principles, guidelines, and conventions. Prerequisites: Reading level 4, Writing level 4, HITT 1301, HITT 1305, HPRS 2301. (3:2-2)

HITT 1345 Health Care Delivery Systems (510707)

This is an introduction to organization, financing, and delivery of health care services, accreditation, licensure and regulatory agencies. Prerequisites: Reading level 4, Writing level 4. (3:3-0)

HITT 1353 Legal and Ethical Aspects of Health Information (510707)

This course focuses on concepts of confidentiality, ethics, health care legislation and regulations relating to the maintenance and use of health information. Prerequisites: Reading level 4, Writing level 4. (3:3-0)

HITT 1355 Health Care Statistics (510707)

This course in general principles of health care covers statistics and emphasizes hospital statistics. It promotes skill development in computation and calculation of health data to include variability, probability, correlation and regression. Prerequisites: Reading level 4, Writing level 4, Math level 4. (3:3-0)

HITT 1360 Clinical Coding (510707)

This is a health-related work-based learning experience that enables the coding student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by a clinical professional. Prerequisites: HITT 1341, HITT 2335, HITT 2346. (3:0-9)

HITT 1361 Clinical (510707)

This is a health-related work-based learning experience that enables the cancer data management student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by a clinical professional. Prerequisites: HITT 1372 and HITT 1373. (3:0-9)

HITT 1370 Advanced Medical Insurance (510707)

This advanced course emphasizes ICD-9 and CPT coding of office procedures for payment and reimbursement by patient and third party. Prerequisites: MDCA 1343. (3:2-2)

HITT 1372 Cancer Data Management I (510707)

(Not Offered after Summer 2009)

This introduction to cancer data management, includes cancer program requirements, the American College of Surgeons Cancer Program Survey process, and data collection/retrieval-abstracting coding, staging and reporting. Prerequisites: HITT 1301, HITT 1305, HPRS 2301, HITT 1374. (3:3-0)

Course Descriptions

HITT 1373 Cancer Data Management II (510707)

(Not Offered after Summer 2009)

In this continuation of HITT 1372, students gain hands-on experience in the application of health care practices. Skills to be utilized by students in this course include active listening, ability to develop and articulate position statements, participation in class dialogue, willingness to listen to opinions/views that differ from their own, and willingness to change views when one's own has been found faulty using principles of reason. Prerequisites: HITT 1372. (3:3-0)

HITT 1374 Anatomy and Physiology (510707)

This is a general overview of the normal structure and function of human body systems. Prerequisites: Reading level 4, Writing level 4, Math level 4. (3:3-1)

HITT 2245 Coding Certification Exam Review (510713)

Review of coding competencies and skills pertinent to the technology and relevant to the professional development of the student in preparation for a coding certificate exam. Prerequisites: Reading level 4, Writing level 4, and Math level 4. (2:2-0)

HITT 2249 RHIT Competency Review (510707)

This is a review of HITT competencies, skills, knowledge, and/or attitudes, and behavior pertinent to the technology and relevant to the professional development of the student. Prerequisite: instructor approval. (2: 1-2)

HITT 2307 Cancer Data Management II (510707)

(Formerly HITT 1373)

This is a continuation of HITT 1307 and is an intermediate Cancer Data Management course. This course includes cancer program requirements by the National Cancer Registrars Association. It includes ACoS survey process, and data collection/retrieval, abstracting, coding, staging, and reporting. Prerequisite: HITT 1307. Corequisite: HITT 2370. (3:3-0)

HITT 2335 Coding and Reimbursement Methodologies (510713)

This course focuses on development of advanced coding techniques, with emphasis on case studies, health records, and federal regulations regarding perspective payment systems and methods of reimbursement. Prerequisite: HITT 1341. (3:2-2)

HITT 2339 Health Information Organization and Supervision (510707)

This course focuses on principles of organization, management, and supervision of human, fiscal, and capital resources in the health care setting. Prerequisites: Reading level 4, Writing level 4, Math level 4. (3:3-0)

HITT 2343 Quality Assessment and Performance Improvement (510707)

This is a study of the many facets of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats; quality tools; utilization management; risk management; and medical staff data quality issues. Prerequisites: Reading level 4, Writing level 4. (3:3-0)

HITT 2346 Advanced Medical Coding (510713)

This course provides in-depth coverage of ICO and CPT coding rubrics, conventions, principles, and updates as they apply to accurate coding of complex medical/surgical cases, with emphasis on case studies. Government regulations and changes in health care reporting are addressed. Prerequisites: HITT 1301, HITT 1305, HPRS 2301 (3:3-0)

HITT 2360 Clinical I

This basic type of health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow in a clinical setting. Prerequisites: HITT 1301, HITT 1353. (3:0-9)

HITT 2361 Clinical II

This advanced type of health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and gain experience managing the workflow in a clinical setting. Prerequisites: HITT 2360, HITT 1341, HITT 1353, HITT 2339. (3:0-9)

HITT 2370 Cancer Data Management III (510707)

This is an advanced level course in Cancer Data Management to include Cancer Program requirements, the American College of Surgeons guidelines, and heavy concentration in abstracting, coding, staging, and State and National reporting requirements. Prerequisites: HITT 1307. Corequisite: HITT 2307. (3:3-0)

HPRS 2301 Pathophysiology (510000)

This is a study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and physical and physiological reactions to diseases and injuries. Prerequisites: Reading level 4, Writing level 4. (3:3-0)

History

HIST 1301 American History Before 1877 (5401025125)

(Formerly History 131, HIST 1311)

This is a general survey of the history of the United States before 1877, including its European background, discovery, exploration, revolution, independence, federation, westward expansion, slavery, the Civil War, and Reconstruction. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

HIST 1302 American History Since 1877 (5401025125)

(Formerly History 132, HIST 1312)

This is a general survey of the history of the United States since Reconstruction, including industrialization, reform movements, emergence as a world power, participation in World War I and World War II, and other foreign and domestic developments up to the present. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

HIST 2301 History of Texas (5401025225)

(Formerly History 235, 2303, HIST 2315)

A general survey of the historical period of Texas, including Spanish and Mexican control; the Republic, statehood, and the Confederacy; and the Reconstruction Era. The course also traces the development of industries, agriculture and education. This course satisfies one-half of the legislative requirement of six semester hours in American history. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

HIST 2311 History of Western Civilization Before 1660 (European History) (5401015425)

(Formerly History 237, HIST 2317)

This survey of western civilization prior to 1660, includes the study of ancient and medieval background, the Renaissance, the Reformation, the rise of the monarchies, new discoveries, the downfall of feudalism, and European expansion. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

HIST 2312 History of Western Civilization Since 1660 (European History) (5401015425)

(Formerly History 238, HIST 2318)

A survey of world history with special emphasis is on Europe from 1660 to the present, this course includes the study of the Industrial Revolution, the French Revolution, the Congress of Vienna, the age of Metternich, the rise of democracy, the Europeanization of the world, the British Empire, World War I, World War II, and present-day Europe. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

HIST 2321 World Civilization I (5401015325)

This is a survey of the political, social, economic, military, cultural, and intellectual developments of ancient and medieval history, with emphasis on Asian, African, and European cultures. Prerequisites: Reading level 7 and Writing level 7 (3:3-0).

HIST 2322 World Civilization II (5401015325)

This is a survey of the political, social, economic, military, cultural, and intellectual developments of modern history, with emphasis on the cultures of Asia, Africa, Europe, and the Americas. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

HIST 2327 Mexican-American History I (0502035225)

Historical, economic, social, and cultural development of Mexican-Americans/Chicanos/as to 1900. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

HIST 2328 Mexican-American History II (0502035225)

Historical, economic, social, and cultural development of Mexican-Americans/Chicanos/as from 1900 to the present. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

Humanities

HUMA 1305 Introduction to Mexican-American Studies (0502035225)

Introduction to the field of Mexican-American/Chicano/a Studies from its inception to the present. Interdisciplinary survey designed to introduce students to the salient cultural, economic, educational, historical, political, and social aspects of the Mexican-American/Chicano/a experience. Prerequisites: Reading level 6 and Writing level 6. (3:3-0)

HUMA 1311 Mexican-American Fine Arts Appreciation (5007035426)

An examination of Mexican-American/Chicano/a artistic expressions in the visual and performing arts. Prerequisite: Reading level 6. (3:3-0)

Information Technology

(Formerly Computer Information Systems)

EDTC 1341 Instructional Technology and Computer Applications (131501)

(Formerly CSCI 2311)

This course focuses on teaching future educators how to use specialized educational technology. The topics include the integration of educational computer terminology, system operations, software, and multimedia in the contemporary classroom environment. (3:2-2)

GAME 1303 Introduction to Game Design and Development (100304)

(Formerly ITSE 1302)

This course covers the introduction to electronic game development and game development careers. It includes the examination of the history and philosophy of games, the game production process, employee factors for success in the field, current issues and practices in the game development industry, and designing and implementing simple computer games. Software development is done using state-of-the-art software. (3:2-2)

GAME 1304 level Design (100304)

This course covers the introduction to the tools and concepts used to create levels for games and simulations. It incorporates level design, architecture theory, concepts of critical path and flow, balancing, play testing, and storytelling, and includes utilization of toolsets from industry titles. (3:2-2)

GAME 1343 Graphics and Simulation Programming I (100304)

This course covers game and simulation programming. It includes advanced pointer manipulation techniques and pointer applications, points and vectors, sound, and graphics. Prerequisite: ITSE 2331 or COSC 2336 (can be taken as a co-requisite), or department chair approval. (3:2-2)

GAME 1353 Multi-User Game Programming I (100304)

This course covers network topologies, architecture and protocols, and communication in game and simulation programming. It introduces sockets programming utilizing TCP and UDP protocols in a high-level language, and focuses on blocking and asynchronous modes. Prerequisite: GAME 1343, and ITNW 1325, or ITCC 1401, and Math level 6; or department chair approval. (3:2-2)

GAME 2332 Project Development I (100304)

This course includes skill development in an original modification based on a current game engine. It includes management of version control; development of project timelines; integration of sound, models, and animation; production of demos; and creation of original levels, characters, and content for a real-time multiplayer game. It applies skills learned in previous classes in a simulated real-world design team experience. Prerequisite: ITSE 1307 and GAME 1343 (can be taken as a co-requisite), or department chair approval. (3:2-2)

GAME 2341 Game Scripting (100304)

This course covers scripting languages with emphasis on game concepts and simulations. It includes design, navigation, and graphics with an emphasis on game concepts and simulations using a high-level scripting language, such as Python. Prerequisite: ITSE 1307 or COSC 1337, or department chair approval. (3:2-2)

GAME 2344 DirectX Programming (100304)

This course covers exploration of the advanced suite of multimedia application programming interfaces (API) built into the Microsoft Windows operating system. It includes fundamentals of Direct X's API that give multimedia applications access to advanced features of high-performance hardware such as 3-D graphics acceleration chips and sound cards. It also addresses control of low-level functions including 2-D graphics acceleration; support for input devices such as joysticks, keyboards, and mice; and control of sound mixing and sound output. Prerequisite: Math level 6 and ITSE 2331 or COSC 2336, or department chair approval. (3:2-2)

Course Descriptions

GAME 2359 Game and Simulation Group Project (100304)

This course focuses on the creation of a game and/or simulation project utilizing a team approach. It includes the integration of design, art, audio, programming, quality assurance, animation, titles, visualization of research results, modeling with polygon frames, curves and surfaces, 3-D text and animation with keyframes, paths (objects and curves), morphing, vertex keys, skeletons, and lattices. Prerequisite: GAME 2332 or department chair approval. (3:2-2)

IMED 1341 Interface Design with Photoshop (110801)

This course offers skill development in the interface design process, including selecting interfaces that are meaningful to users and relative to a project's content and delivery system. The emphasis is on aesthetic issues such as iconography, screen composition, colors, and typography. This course utilizes Photoshop software package. (3:2-2)

IMED 1345 Interactive Multimedia I (110801)

This course covers the use of graphics and sound to create interactive multimedia applications and/or animations using industry-standard authoring software. Prerequisite: ITSE 1319. (3:2-2)

IMED 2309 Internet Commerce (520208)

(Not offered after Spring 2008)

This overview of the Internet as a marketing and sales tool emphasizes developing a prototype for electronic commerce. Topics include database technology, creating websites in order to collect information, performing online transactions, and generating dynamic content. Prerequisite: ITSE 1305 or department chair approval. (3:2-2)

INEW 2301 Macros for Applications (110201)

This course is a study of macros used for applications. The topics include analysis of the need for macros in various applications, macro design considerations, and macro coding and implementation. Students write macro code using available tools for rapid development, customize existing macros for special use, and create and enhance the applications user interface. Prerequisite: COSC 1337 or ITSE 1307 or department chair approval. (3:2-2)

INEW 2330 Computer Software Project I: Plan and Design (110101)

This course is a comprehensive application of skills learned in previous IT courses in a simulated workplace, and covers the development, testing, and documenting of a complete software and/or hardware solution. The students will analyze and design a solution for a business problem using computer resources, demonstrate the ability to function as a successful part of programming team, demonstrate the ability to properly document the project, and demonstrate the knowledge and skills to function competently as an entry-level programmer or software engineer on the job (design). Prerequisite: COSC 2336 or ITSE 2331 or ITSE 2349, or department chair approval. (3:2-2)

INEW 2332 Comprehensive Software Project II: Coding, Testing and Implementation (110101)

This course is a comprehensive application of skills learned in the previous semester in a simulated workplace. It covers coding, testing, and documentation of a complete software and/or hardware solution. Prerequisite: INEW 2330 or department chair approval. (3:2-2)

INEW 2340 Object-Oriented Design (110201)

This course offers further applications of programming techniques, including system analysis and design concepts from the object-oriented perspective. The student will build/use case models, sequence diagrams, class diagrams and state charts. The topics include determining what objects will be required, what members an object requires, and the relationships between objects. It also includes an in-depth look at various data structures and the operations performed on them. The students will develop correct, well-documented programs containing complex data structures; incorporate arrays, records, stacks, queues, lists, and trees; and use searching, sorting, traversal, and recursion techniques. Prerequisite: GAME 1303 or department chair approval; or co-requisite: ITSE 1307 and department chair approval. (3:2-2)

INEW 2334 Advanced Web Programming-E-Commerce (110801)

(Formerly IMED 2309)

This course focuses on programming for web authoring. Includes industry-standard languages and data stores. It includes an in-depth study of the Internet as a marketing and sales tool with emphasis on developing a

working prototype for electronic commerce. The topics include database technology, creating websites in order to collect information, performing online transactions, and generating dynamic content. The students will develop their own e-commerce website. Prerequisite: ITSE 1319 or department chair approval. (3:2-2)

ITCC 1401 Exploration-Network Fundamentals (111002)

(Formerly ITCC 1402)

This course introduces the architecture, structure, functions, components, and models of the Internet. It describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. It covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. The students will build simple LAN topologies by applying basic principles of cabling; performing basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. Prerequisite: ITSC 1305 or department chair approval. (4:3-2)

ITCC 1404 Cisco Exploration 2 - Routing Protocols and Concepts (111002)

(Formerly ITCC 1406)

This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. The students will analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF, recognize and correct common routing issues and problems, and model and analyze routing processes. Prerequisite: ITCC 1401 or department chair approval. (4:3-2)

ITCC 2408 Cisco Exploration 3 - LAN Switching and Wireless (111002)

(Formerly ITCC 1442)

This course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks. It includes detailed explanations of LAN switch operations; VLAN implementation; Rapid Spanning Tree Protocol (RSTP); VLAN Trunking Protocol (VTP); Inter-VLAN routing; and wireless network operations, analysis, configuration, verification and troubleshooting VLANs, RSTP, VTP, and wireless networks; and campus network design and Layer 3 switching concepts. Prerequisite: ITCC 1404 or department chair approval. (4:3-2)

ITCC 2410 Cisco Exploration 4-Accessing the WAN (111002)

(Formerly ITCC 1446)

This course explains the principles of traffic control and access control lists (ACLs) and provides an overview of the services and protocols at the data link layer for wide-area access. It describes user access technologies and devices and discovers how to implement and configure Point-to-Point Protocol (PPP) over Ethernet (PPPoE), DSL, and Frame Relay. WAN security concepts, tunneling, and VPN basics are introduced. Also discussed are the special network services required by converged applications and an introduction to quality of service (QoS). Prerequisite: ITCC 2408 or department chair approval. (4:3-2)

ITCC 2432 CCNP 1: Advanced Routing (111002)

(Formerly ITCC 2332)

This course is a study of advanced network deployment issues and methods used to configure Cisco routers for effective LAN and WAN traffic management. The topics include designing scalable internetworks, managing traffic, configuring OSPF in single and multiple areas, configuring EIGRP, configuring and using interior and border gateway routing protocols, and techniques used for route filtering and route redirection. In addition, this course will help prepare the student for the Cisco Certified Network Associate (CCNP) exam. Prerequisite: ITCC 2410 or department chair approval. (4:3-2)

ITCC 2436 CCNP 2: Remote Access (111002)

(Formerly ITCC 2336)

This course covers designing and building remote access networks with Cisco products. Includes assembling and cabling WAN components, configuring network connections via asynchronous modem, ISDN, X.25, broadband, Virtual Private Network (VPN), and frame relay architectures and associated protocols. This course will help prepare the student for the Cisco Certified Network Associate (CCNP) exam. Prerequisite: ITCC 2432 or department chair approval. (4:3-2)

ITCC 2440 CCNP 3: Multilayer Switching (111002)

(Formerly ITCC 2340)

This course introduces students to the deployment of the state-of-the-art campus LANs. This course focuses on the selection and implementation of the appropriate Cisco IOS services to build reliable scalable multilayer-switched LANs. Students will develop skills with VLANs, VTP, STP, inter-VLAN routing,

multilayer switching, redundancy, Cisco AVVID solutions, Quality of Service (QoS) issues, campus LAN security, and emerging transparent LAN services. This course stresses the design, implementation, operation, and troubleshooting of switched and routed environments. This course helps prepare the student for the Cisco Certified Network Associate (CCNP) exam. Prerequisite: ITCC 2436 or department chair approval. (4:3-2)

ITCC 2444 CCNP 4: Internetwork Troubleshooting (111002)

(Formerly ITCC 2344)

This course focuses on documenting and baselining networks and Layer 1 through 4 troubleshooting. Topics include Cisco Troubleshooting Tools, diagnosing and correcting problems with TCP/IP, Frame Relay, and ISDN network connections. This course helps prepare the student for the Cisco Certified Network Associate (CCNP) exam. Prerequisite: ITCC 2440 or department chair approval. (4:3-2)

ITMC 2337 Programming a Microsoft SQL Server Database (110802)

This course covers mastering programming and implementing a database solution by using SQL Server. Topics include designing an SQL Server application, describing transact-SQL, creating and managing databases, implement data integrity, optimizing query performance, creating and maintaining indexes. This course helps prepare the student for the Microsoft Certified Network Engineer (MCSE) or Microsoft Certified DataBase Administrator (MCDBA) exams. This is a Microsoft IT Academy course. Prerequisite or co-requisite: ITMT 2303 or department chair approval. (3:2-2)

ITMC 2355 Deploying and Management Microsoft Internet Security and Acceleration Server (111003)

(Not offered after Spring 2008)

Advanced concepts of deploying and managing the Microsoft Internet Security and Acceleration (ISA) Server in an enterprise environment. Prerequisite: ITMC 2331. (3:2-2)

ITMT 1300 Implementing and Supporting Microsoft Windows XP Professional (110901)

(Formerly ITMC 1358)

(Not offered after Summer 2009)

This course addresses the implementation and desktop support needs of customers that are planning to deploy and support Microsoft Windows XP Professional in a variety of

stand-alone and network operating system environments. It also includes in-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management, and support of Windows XP Professional. This course helps prepare the student for the Microsoft Certified Network Administrator (MCSA) and the Microsoft Certified Network Engineer (MCSE) exams. This is a Microsoft IT Academy course. Prerequisite: ITNW 1325 or department chair approval. (3:2-2)

ITMT 1340 Managing and Maintaining a Microsoft Windows Server 2003 (110901)

(Formerly ITMC 1319)

This course covers managing accounts and resources, maintaining server resources, monitoring server performance, and safeguarding data in a Microsoft Windows Server 2003 environment. This course helps prepare the student for the Microsoft Certified Network Administrator (MCSA) and the Microsoft Certified Network Engineer (MCSE) or Microsoft Certified DataBase Administrator (MCDBA) exams. This is a Microsoft IT Academy course. Prerequisites: ITNW 1325 or ITSW 2337 or department chair approval. (3:2-2)

ITMT 1350 Implementing, Managing and Maintaining a Microsoft Windows Server 2003 Infrastructure: Network Services (110901)

(Formerly ITMC 1342)

This course covers implementing routing; implementing, managing, and maintaining Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and Windows Internet Name Service (WINS); securing Internet Protocol (IP) traffic with Internet Protocol security (IPSec) and certificates. It also covers implementing a network access infrastructure by configuring the connections for remote access clients; and managing and monitoring network access. This course helps prepare the student for the Microsoft Certified Network Administrator (MCSA) and the Microsoft Certified Network Engineer (MCSE) exams. This is a Microsoft IT Academy course. Prerequisite: ITMT 1300 or ITNW 1308 and ITMT 1340 or ITNW 1354 or department chair approval. (3:2-2)

Course Descriptions

ITMT 2300 Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure (110901)

(Formerly ITMC 1343)

This course covers Windows Server 2003 directory service environment. Includes forest and domain structure; Domain Name System (DNS); site topology and replication; organizational unit structure and delegation of administration, group policy and user, group, and computer account strategies. This course helps prepare the student for the Microsoft Certified Network Engineer (MCSE) exams. This is a Microsoft IT Academy course. Prerequisite: ITMT 1340 or ITNW 1354 or department chair approval. (3:2-2)

ITMT 2303 Administering a Microsoft SQL Database (110901)

(Formerly ITMC 2303)

This course is an in-depth coverage of the knowledge and skills required to install, configure, administer, and troubleshoot the client-server database management system of Microsoft SQL Server databases. This course helps prepare the student for the Microsoft Certified Network Engineer (MCSE) exams. This is a Microsoft IT Academy course. Prerequisite: ITMT 1340 or ITNW 1354 or department chair approval. (3:2-2)

ITMT 2330 Designing a Microsoft Windows Server 2003 Active Directory and Network Infrastructure (110901)

(Formerly ITMC 2331)

This course covers designing a Microsoft Active Directory service and network infrastructure for a Microsoft Windows Server 2003 environment. Intended for systems engineers who are responsible for designing directory service and/or network infrastructures, this course helps prepare the student for the Microsoft Certified Network Administrator (MCSA) and the Microsoft Certified Network Engineer (MCSE) exams. This is a Microsoft IT Academy course. Prerequisite: ITMT 1300 or ITNW 1308 and ITMT 1340 or ITNW 1354 or department chair approval. (3:2-2)

ITMT 2340 Designing Security for Microsoft Networks (110901)

(Formerly ITMC 2333)

This course covers assembling the design team, modeling threats, and analyzing security risks. It includes developing decision-making skills through the use of an interactive tool that simulates real-life scenarios. It focuses on collecting information and sorting through details to resolve a given security requirement.

This course helps prepare the student for the Microsoft Certified Network Engineer (MCSE) exams. This is a Microsoft IT Academy course. Prerequisite: ITMT 1300 or ITNW 1308 and ITMT 1340 or ITNW 1354 or department chair approval. (3:2-2)

ITMT 2350 Implementing and Managing Microsoft Exchange (110901)

(Formerly ITMC 2304)

This course covers updating and supporting a reliable, secure messaging infrastructure used for creating, storing, and sharing information by using Microsoft Exchange Server 2003 IT. Includes a significant amount of hands-on practices, discussions, and assessments to assist students in becoming proficient in the skills necessary to update and support Exchange Server 2003. This course helps prepare the student for the Microsoft Certified Network Engineer (MCSE) exams. This is an Microsoft IT Academy course. Prerequisite: ITMT 1300 or ITNW 1308 and ITMT 1340 or ITNW 1354 or department chair approval. (3:2-2)

ITNW 1308 Implementing and Supporting Client Operating Systems (110901)

(Formerly ITNW 1348)

This course includes how to install and configure network clients; set up users, groups, policies, and profiles; configure hardware components and applications, set up and maintain a logon security and security for files and printers, configure clients in multiple environments including Microsoft, TCP/IP, and Novell Networks. It also covers how to implement dial-up networking and tune system performance. Prerequisite: ITNW 1325 or ITCC 1401 or department chair approval. (3:2-2)

ITNW 1325 Fundamentals of Networking Technologies (111002)

(Formerly ITMC 1301, ITNW 1333)

This course covers instruction in networking technologies and their implementation. Topics include network fundamentals and terminology; the OSI reference model; network protocols; transmission media; networking hardware and software; identifying media used in network communication; connecting servers and clients in a network; recognizing the primary network architectures/topologies; determining how to implement and support the major networking components, including the server, operating system, and clients; distinguishing between Local Area Networks (LANs) and Wide Area Networks (WANs); identifying the components used to expand a LAN into a WAN; how to

implement connectivity devices in the larger LAN/WAN environments; and networking technologies as they apply to current Microsoft Windows Operating Systems. The students will gain experience installing, configuring and maintaining current Windows Operating Systems. Prerequisite or co-requisite: ITSC 1305 or department chair approval. (3:2-2)

ITNW 1345 Implementing Network Directory Services (110901)

This course provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows 2003 Active Directory services. The course focuses on Implementing Group Policy Objects, deploying software by using group policies, configuring Domain Name System (DNS) to manage name resolution, schema and replication, use of Active Directory to manage users, groups, shared folders, and network resources. Students also learn how to implement and troubleshoot security in a directory services infrastructure and monitor and optimize Active Directory performance. This course also provides the student with experience in managing and troubleshooting software using group policies. Prerequisite: ITNW 1354 or ITMT 1340 or department chair approval. (3:2-2)

ITNW 1353 Supporting Network Server Infrastructure (110901)

This course provides the student with skills necessary to install, configure, manage, monitor, support, and troubleshoot a network infrastructure that uses the Microsoft Windows server family of products such as DHCP, DNS, Certificates, DNS, Routing protocols, L2TP, DHCP, NAT, configuring security using Public Key, and deployment of Windows using remote installation services. Prerequisite: ITNW 1354 or ITMT 1340 or department chair approval. (3:2-2)

ITNW 1354 Implementing and Supporting Servers (110901)

This course includes topics such as implementing, administering, and troubleshooting information systems that incorporate servers in a networked computing environment. It also includes managing accounts and resources, maintaining server resources, monitoring server performance, safeguarding data in a Microsoft Windows Server 2003 environment, development of skills necessary to implement, administer, and troubleshoot information systems that incorporate Windows Based Servers in a networked computing environment, setting up servers for various client computers, configuring directory replication, managing

Course Descriptions

licensing, user group accounts, user profiles, system policies, and profiles, administering remote servers, disk resources, creating and sharing resources, implementing permissions and security, fault-tolerance, installing and configuring RAS, performance bottlenecks; and configuring problems. Prerequisite: ITNW 1308 or ITMT 1300 or department chair approval. (3:2-2)

ITNW 1392 Special Topics in Computer Systems Networking and Telecommunications (110901)

This course addresses topics such as recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency. Prerequisite: department chair approval. (3:2-2)

ITNW 2305 Network Administration (111001)

(Formerly CSCI 2341)

This course prepares students to effectively manage a network. Topics include network components, user accounts and groups, network file systems, file system security, network printing, and administration utilities. Prerequisite: ITNW 1325 or department chair approval. (3:2-2)

ITNW 2346 Designing a Secure Network (110901)

(Not offered after Spring 2008)

Provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks by using Microsoft Windows networking technologies. (3:2-2)

ITNW 2352 Administering SQL Server (110901)

(Formerly ITMC 2355)

This course covers administering the SQL Server. It develops skills development in the installation, configuration, administration, and troubleshooting of SQL servers and client/server database management systems. Prerequisite: ITSW 2337 and ITNW 1325 or department chair approval. (3:2-2)

ITNW 2354 Internet/Intranet Server (110901)

(Formerly CSCI 2334)

This course covers designing, installing, configuring, maintaining, and managing an Internet/Intranet server. Topics include workstation maintenance and Internet-related protocols, implementation of Internet servers

such as World Wide Web (WWW), file transfer protocols (FTP), news groups and e-mail. It also includes hands-on experience building web servers. Prerequisites: ITNW 1325 or ITCC 1401 or department chair approval. (3:2-2)

ITNW 2356 Designing Network Directory Infrastructure Servers (110901)

This course covers how to design, implement, and support network operating systems, and server directory infrastructure in a multi-domain environment. Prerequisite: ITNW 2355. (3:2-2)

ITNW 2371 Network Design and Documents (521204)

(Not offered after Spring 2008)

This course provides vendors independent, advanced information on designing and implementing network systems for small- to medium-sized businesses. Topics include topology design, hardware and media selection, security, strategies for scalability, and documentation. Skills learned will culminate in a large design project. Prerequisite: ITNW 2305 ITNW 1354 or ITMC 1319 or department chair approval. (3:3-0)

ITSC 1301 Introduction to Computers (110101)

(Formerly CSCI 1311)

This course is an overview of computer information systems. It introduces computer hardware, software, procedures, and human resources, and explores integration and application in business and other segments in society. Fundamentals of computer problem solving and programming may also be discussed and applied. It also examines applications and software relating to specific curricular areas. (3:3-0)

ITSC 1305 Introduction to PC Operating Systems (110101)

(Formerly CSCI 1323)

This course covers an introduction to personal computer operating systems. Topics include installation and configuration, file management, memory and storage management, control of peripheral devices, and use of utilities. Operating systems covered include DOS, Windows and UNIX. Prerequisite or co-requisite: ITSC 1309 or equivalent knowledge. (3:2-2)

ITSC 1307 UNIX Operating System I (110101)

(Formerly ITSW 1306)

This course covers an introduction to the UNIX operating system, including multi-user concepts, terminal emulation, use of system editor, basic UNIX commands, and writing script files. Topics include introductory systems management concepts. Prerequisite: ITSC 1305 or department chair approval. (3:2-2)

ITSC 1309 Integrated Software Applications I (110101)

(Formerly CSCI 1321)

This course covers an introduction to business productivity software suites using word processing, spreadsheets, databases, and/or presentation software. It includes instruction in embedding data, linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Fundamentals of personal computer operations and the Windows operating system will also be covered. (3:2-2)

ITSC 1319 Internet/Web Page Development (111004)

(Formerly ITSE 1311, ITSE 1305, ITSC 1313)

The course includes instruction in the use of Internet concepts and the introduction to web page design and web site development. It is an introduction to designing and publishing Web documents. It includes basic markup language, hyperlinks, tables, frames, images, forms, and an exploration of tools available for creating and editing Web documents. (3:2-2)

ITSC 1321 Intermediate PC Operating Systems (110101)

This course covers custom operating system installation, configuration, and troubleshooting. Topics include installation and configuration, file management, memory and storage management, continued study in advanced installation, configuration troubleshooting, advanced file management, memory, storage management, update peripheral device drivers, and use of utilities to increase system performance. This will extend the student's knowledge of hardware, systems and application software, data integration and communications. Prerequisite: ITSC 1325 or department chair approval. (3:2-2)

Course Descriptions

ITSC 1325 Personal Computer Hardware (470104)

This course is a study of current personal computer hardware, including personal computer assembly and upgrading, setup and configuration, and troubleshooting. Major topics include an overview of the computer system, installing and configuring hardware and software, troubleshooting hardware and software problems, management of the computer's resources (including hard drive space and memory) data storage on hard drives and floppy disks, data recovery methods, and installing peripheral equipment. Prerequisite: ITSC 1305 or department chair approval. (3:2-2)

ITSC 1391 Special Topics in Computer and Informational Sciences, General (110101)

This course addresses topics including recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation relevant to the professional development of the student. Prerequisite: department chair approval. (3:2-2)

ITSC 2321 Integrated Software Applications II (110101)

(Formerly ITSC 2341)

This course is an intermediate study of computer applications from business productivity software suites. Instruction in embedding data and linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Prerequisite: ITSC 1309 or department chair approval. (3:2-2)

ITSC 2335 Application Software Problem Solving (110101)

This course covers the utilization of appropriate application software to solve advanced problems and generate customized solutions. It includes projects and software specific to a particular curricular area. Prerequisite: ITSE 2331, ITSE 2349, ITSE 2302 or ITSE 2317 (ITSE 2317 and ITSE 1331 may also be taken as co-requisites), or department chair approval. (3:0-21)

ITSC 2337 UNIX Operating System II (110101)

(Formerly CSCI 2344, ITSW 2336)

This course is a continued study of the UNIX operating system commands. It includes advanced concepts of system management and communication, the installation and maintenance of software, network security, and data integrity issues. This course heavily utilizes the Linux OS and includes additional topics such as CGI, PERL and scripting languages. Prerequisite: ITSC 1307 or department chair approval. (3:2-2)

ITSC 2339 Personal Computer Help Desk (110101)

This course covers the diagnosis and solution of user hardware and software related problems with on-the-job projects and/or simulated projects. The students will participate in the construction of an expert system. Prerequisite: ITSC 2321 or department chair approval. (3:2-2)

ITSC 2364 Practicum-Computer and Information Sciences, General (110101)

(Formerly ITSC 2386)

This course offers experience external to the college for advanced students in a specialized IT field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by the instructor and a workplace employee, the student achieves objectives that are developed and documented by the college and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. Prerequisite: 15 credit hours of computer courses (9 of these credit hours must be earned at San Jacinto College) which must include one of the following courses: ITSE 2351, ITSE 2349, ITSE 2331, ITSW 2334, ITSW 2337, ITNW 2305, ITNW 2354, ITMT 1340, ITCC 1404, or ITSE 2313. An accumulative GPA of at least 2.0 is required. An interview and department chair approval are required 60 days prior to enrollment. (3:0-21)

ITSE 1302 Computer Programming (110201)

(Not offered after Spring 2008)

Introduction to computer programming with emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files students. Use structured programming techniques, develop correct executable programs, and create appropriate documentation. (3:2-2)

ITSE 1307 Introduction to C++ Programming (110201)

This course is an introduction to computer programming using C++. The emphasis is on the fundamentals of object-oriented design with development, testing, implementation, and documentation. It includes language syntax, data and file structures, input/output devices, and files. Since C++ is based on the C language, the course will also cover some C language functions and techniques. Students will learn/ use standard C++ to complete assignments which give experience in coding, testing, and debugging applications. Prerequisite: ITSE 1331 or department chair approval. (3:2-2)

ITSE 1311 Beginning Web Programming-with Photoshop (110801)

(Formerly ITSE 1305 or ITSE 1313)

(Not offered after Summer 2009)

This course emphasizes skill development in web page programming including mark-up and scripting languages. It also includes instruction in the use of Internet services, the fundamentals of Web page design, website development, an introduction to designing and publishing Web documents, basic mark-up language, hyperlinks, tables, frames, images, forms, and exploration of tools available for creating and editing Web documents. (3:2-2)

ITSE 1318 Introduction to COBOL Programming (110201)

(Formerly CSCI 1326)

This course is an introduction to computer programming using COBOL. The emphasis is on the fundamentals of structured design, development, testing, implementation, and documentation. It includes language syntax, data and file structures, input/output devices, files, editing, and an introduction to tables. Prerequisite: ITSE 1329 or department chair approval. (3:2-2)

ITSE 1329 Programming Logic and Design (110201)

(Formerly CSCI 1312)

This course covers problem-solving by applying structured techniques and representation of algorithms using appropriate design tools such as hierarchy charts, flowcharts, and pseudocode. It includes discussions of methods for testing, evaluating, and documenting programs. (3:3-0)

ITSE 1331 Introduction to Visual BASIC Programming (110201)

(Formerly CSCI 1328)

This course is an introduction to computer programming using Visual BASIC. The emphasis is on the fundamentals of structured design, development, testing, implementation, and documentation. It includes language syntax, data and file structures, input/output devices, the 3 control structures (sequence, branch, and loop), the use of sequential files, interactive screen processing, printed report generation, and event driven programming. Prerequisite: or co-requisite: ITSE 1329 or department chair approval. (3:2-2)

ITSE 1345 Introduction to Oracle SQL (110201)

(Formerly ITSE 1350)

This course is an introduction to the design and creation of relational databases using Oracle. The topics include storing, retrieving, updating, and displaying data using Structured Query Language (SQL). Prerequisite: or co-requisite: ITSW 1307 or department chair approval. (3:2-2)

ITSE 1391 Special Topics in Computer Programming (110201)

The course addresses programming topics which include recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation, relevant to the professional development of the student. Prerequisite: department chair approval. (3:2-2)

ITSE 2305 Windows Programming (110201)

This course is an introduction to computer programming for Windows. The emphasis is on the fundamentals of structured design, development, testing, implementation, and documentation. It includes language syntax, data and file structures, input/output devices, and files. Prerequisites: ITSE 1331. (3:2-2)

ITSE 2309 Database Programming (110802)

This is a course in database development using database programming techniques emphasizing database structures, modeling and database access. The topics include developing database applications using a Structured Query Languages (SQL Server) to design SQL Server applications, Architecture, describe Transact-SQL, create and manage databases, implement data integrity, create queries and reports from database tables, optimize query performance, create and maintain indexes, and create appropriate documentation. Prerequisite: ITSW 2337 or department chair approval. (3:2-2)

ITSE 2313 Web Authoring (110801)

This course provides instruction in designing and developing Web pages that incorporate text, graphics, and other supporting elements using current technologies and authoring tools. Prerequisite: ITSC 1319 or department chair approval. (3:2-2)

ITSE 2317 Java Programming (110201)

This course is an introduction to object-orientation Java programming. It emphasizes the fundamental syntax and semantics of Java for applications and web applets. Prerequisite: ITSE 1307 or department chair approval. (3:2-2)

ITSE 2331 Advanced C++ Programming (110201)

This course covers further applications of C++ programming techniques, including file access, abstract data structures, class inheritance and other advanced techniques. Students will study Object Oriented Programs (OOP) by using, creating and modifying C++ classes. In addition, they will use many of the standard built-in C++ classes and data structures to solve programming assignments. Prerequisite: ITSE 1307 or department chair approval. (3:2-2)

ITSE 2343 Advanced Windows Programming (110201)

This course covers continued applications of Windows programming, including file access methods, data structures, modular programming, program testing and documentation. It provides instruction in developing correct, well documented programs containing complex data structures, incorporating complex input/output and file handling techniques, developing graphical user interfaces to other applications, and integrated external programs and libraries. Prerequisite: ITSE 2305. (3:2-2)

ITSE 2345 Data Structures (110201)

This course covers further applications of programming techniques. It includes an in-depth look at various data structures and the operations performed on them. The course develops correct, well-documented programs containing complex data structures; incorporates arrays, records, stacks, queues, lists, and trees; and uses searching, sorting, traversal, and recursion techniques. Prerequisite: GAME 1303; or prerequisite/co-requisite: ITSE 1307. (3:2-2)

ITSE 2346 Oracle Application I (110802)

This course provides skill development in the use of forms in a developer environment. Topics include the use of Object Navigator and Virtual Graphics System (VGS), Layout Editor, and Menu Options. Prerequisite: ITSE 1345 or department chair approval. (3:2-2)

ITSE 2349 Advanced Visual BASIC Programming (110201)

(Formerly CSCI 2317)

This is an Advanced Visual Basic programming course with topics that include file access methods, data structures and modular programming, program testing and documentation. Topics include common Graphical User Interface controls, sequential/random file processing, and database processing, and formatted screen/printer output. Prerequisite: ITSE 1331 or department chair approval. (3:2-2)

ITSE 2351 Advanced COBOL Programming (110201)

(Formerly CSCI 2318)

This course covers further applications of programming techniques using COBOL, including file access methods, data structures and modular programming, program testing and documentation. The assigned programs will include subscripted tables, sorting, loading and updating files, maintenance programming, and linked lists. Prerequisite: ITSE 1318 or department chair approval. (3:2-2)

ITSE 2354 Advanced Oracle PL/SQL (110802)

This course is a continuation of Oracle SQL. The topics include hierarchical queries, set based queries, correlated subqueries, scripting, and scripting generation. Prerequisite: ITSE 1345 or department chair approval. (3:2-2)

ITSE 2357 Advanced Object-Oriented Programming (110201)

This course covers the application of advanced object-oriented programming techniques such as abstract data structures, class inheritance, polymorphism, and exception handling. Prerequisite: ITSE 2305. (3:2-2)

ITSW 1307 Introduction to Database (110802)

This is an introduction to database theory and the practical applications of a database. Students will plan, define, and design a database; design and generate tables, forms, and reports; and devise and process queries. Prerequisite: ITSC 1309 or department chair approval. (3:2-2)

Course Descriptions

ITSW 2334 Advanced Spreadsheets (110301)

This course covers the advanced techniques for developing and modifying spreadsheets, including macros and data analysis functions. The topics covered include data entry, graphics, table building and searching, macro development, customized reports, database administration, and statistical analysis. Prerequisite: ITSC 1309 or department chair approval. (3:2-2)

ITSW 2337 Advanced Database (110802)

This course covers advanced concepts of database design and functionality. It is designed to provide an understanding of advanced functionality of databases, including physical representation, design criteria, and application implementation. A data control language is used in the implementation of database processing applications. Programs written will include report generation, multiple file management, relational database management, online screen generation, and menu-driven systems. Prerequisite: ITSW 1307 or department chair approval. (3:2-2)

ITSY 1300 Fundamentals of Information Security (111003)

(Not offered after Spring 2008)

Basic information security goals of availability, integrity, accuracy, and confidentiality. Vocabulary and terminology specific to the field of information security are discussed. Identification of exposures and vulnerabilities and appropriate counter measures are addressed. The importance of appropriate planning and administrative controls are also discussed. (3:3-0).

ITSY 1342 Information Technology Security (111003)

This course provides instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses. Prerequisite: ITNW 1325 or ITCC 1401 or department chair approval. (3:2-2)

ITSY 2300 Operating System Security (111003)

This course provides instruction in safeguarding computer operating systems by demonstrating server support skills and designing and implementing a security system. The student is taught to identify security threats, monitor network security implementations, and use best practices to configure operating systems to industry security standards. Prerequisite or co-requisite: ITSY 1342. (3:2-2)

ITSY 2301 Firewalls and Network Security (111003)

The student is taught to identify elements of firewall design; types of security threats and responses to security attacks; use best practices to design, implement and monitor a network security plan; and examine security incident postmortem reporting any ongoing network security issues. Prerequisite: ITSY 1342. (3:2-2)

ITSY 2341 Security Management Practices (111003)

This course provides in-depth coverage of security management practices, including asset evaluation and risk management; cyber law and ethics issues; policies and procedures; business recovery and business continuity planning; network security design; and developing and maintaining a security plan. Prerequisites: ITSY 2300 and ITSY 2301. (3:2-2).

ITSY 2342 Incident Response and Handling (111003)

This course provides in-depth coverage of incident response and incident handling, including identifying sources of attacks and security breaches; analyzing security logs; recovering the system to normal; performing postmortem analysis; and implementing and modifying security measures. Prerequisites: ITSY 2300 and ITSY 2301. (3:2-2).

ITSY 2343 Computer System Forensics (111003)

This course provides an in-depth study of system forensics including methodologies used for analysis of computer security breaches. It also includes gathering and evaluating evidence to perform postmortem analysis of a security breach. Prerequisite: or co-requisite: ITSY 1342. (3:2-2)

ITSY 2359 Security Assessment and Auditing (111003)

This course is the capstone experience for the security curriculum. It synthesizes technical material covered in prior courses to monitor, audit, analyze, and revise computer and network security systems to ensure appropriate levels of protection are in place to assure regulatory compliance. (3:2-2)

Inspection Technology

(See Non-Destructive Testing Technology)

Instrumentation Technology

Credit Courses

INTC 1301 Principles of Industrial Measurements I (150404)

This course is a study of principles of measurement and devices used to measure process variables such as temperature, pressure, flow, level, and basic control functions. Topics include atmospheric, absolute, gauge, differential and hydrostatic pressure. Temperature topics include filled thermal systems, thermocouples, thermistors and the resistance temperature detector. Test equipment, setup, calibration, maintenance and safe work practices will be included. (3:2-2)

INTC 1312 Instrumentation and Safety (150404)

This course is an overview of industries employing instrument technicians. The course covers instrument safety techniques and practices as applied to the instrumentation field. Topics include terminology; loop diagram symbols; documentation; basic measurement and control concepts; health, safety and environmental concerns; and employment opportunities. (3:2-2)

INTC 1315 Final Control Elements (150404)

(Formerly INST 1312)

This course is a study of the various designs of final control elements including disassembly, assembly, calibration, troubleshooting, and required documentation. It features instruction in basic techniques and calculations for proper valve sizing. Topics include louvers, dampers, metering pumps, valve selection, and an introduction to variable frequency drives as a final control element. Test equipment, setup, calibration, testing, maintenance and safe work practices will be included. (3:2-2)

INTC 1322 Analog Controls I (150404)

This course is a study of basic concepts related to measurement and control theory. It features instruction in instrumentation calibrators and calibration circuits used for servicing and calibration of potentiometers, temperature transmitters and various transducers. Topics include terminology, electrical symbols, electrical drawings, electrical connections and fittings, wire sizes, lighting, switches, circuit breakers, fuses, enunciators, annunciators, alarms and safety shutdowns. Test equipment, setup, calibration, testing, maintenance and safe work practices will be included. Prerequisite/co-requisite: ELPT 1311. (3:2-2)

INTC 1341 Principles of Automatic Control (150404)

This course is a study of the theory of basic measurements, automatic control systems and design, closed loop systems, controllers, feedback, control modes and control configurations. Topics include a study of process characteristics, control modes, control loop configurations, control loop analysis and controller tuning concepts. Computer based simulation will be used to reinforce the study learning objectives. Prerequisites: INTC 1301 and INTC 1315. (3:2-2)

INTC 1348 Analytical Instrumentation (150404)

(Formerly INST 2416)

This course is a study of analytical instruments emphasizing their utilization in process applications including, but not limited to, chromatography, pH, conductivity, and spectrophotometer instruments. Topics include density, viscosity, conductivity, humidity/moisture, chromatography, spectroscopy, fugitive emissions and the flammable and explosive characteristics of solids, liquids and gases. (3:3-0)

INTC 1350 Digital Measurement and Controls (150404)

(Formerly INST 2413)

This course offers a review of basic digital concepts including a study of the movement of digital data through common systems employing parallel and serial transfers using wire lines, fiber optic systems, and radio methods of transfer. Topics include configuration and calibration of smart transmitters and an introduction to digital communications and networks. Test equipment, setup, calibration, testing, maintenance and safe work practices will be included. Prerequisites: ELPT 1311 and INTC 1341. (3:2-2)

INTC 1353 Analog Controls II (150404)

This course is study of analog controls and instrumentation systems. Introduces discrete components and basic power supplies and amplifiers. Topics include the industrial electrical distribution system, motor controls, electrical relay ladder logic and the variable frequency drive. Test equipment, setup, calibration, testing, maintenance and safe work practices will be included. Prerequisite: INTC 1322. (3:2-2)

INTC 1355 Unit Operations (150404)

This course is an in-depth study of industrial processes including fluid flow and material transport, distillation, extraction, and automatic control requirements of these processes. It offers instruction in control system design and control loop adjustments and analysis. Topics include piping systems, pumps, compressors, agitators, tanks, heat exchangers, filters, cooling towers, refrigeration, filtration, adsorption, absorption, extruding, material handling and the distribution of utilities. Startup, operation, safe work practices and shutdown of a simulated or actual operating system will be included. (3:2-2)

INTC 1371 Distributed Control Systems (150404)

(Not offered after Summer 2009)

This course is a study of the philosophy and application of distributed control systems. Topics include hardware, firmware, software, configuration, communications and networking systems required to implement a distributed control strategy. Students learn how the measurement, control data acquisition and data analysis provides for enterprise resource planning and management. An operating system will be used to provide hands-on experience. Prerequisite: INTC 1353 and INTC 1372. (3:2-2)

INTC 1372 Principles of Industrial Measurement II (150404)

(Not offered after Summer 2009)

This course is a study of the physical principles and devices used to measure the process variables of level and flow. Topics include hydrostatic tank gauging, buoyancy, capacitance, ultrasonic, nuclear, radar, and level as a function of weight. Flow topics include variable area, differential pressure, positive displacement, turbine, magnetic, vortex shedder, mass, thermal, and ultrasonic flow meters. Laboratory exercises will include calibration, repair, documentation and safe work practices associated with level and flow measurement, indicating and recording instruments. Test equipment, setup, calibration, testing, maintenance and safe work practices will be included. Prerequisites: INTC 1301, INTC 1353, and INTC 1315. (3:2-2)

INTC 2310 Principles of Industrial Measurements II (150404)

(Formerly INTC 1372)

This course is a study of advanced principles of measurement and devices used to measure process variable and basic control functions. Topics include hydrostatic tank gauging,

buoyancy, capacitance, ultrasonic, nuclear, radar, and level as a function of weight. Flow topics include variable area, differential pressure, positive displacement, turbine, magnetic vortex shedder, mass, thermal, and ultrasonic flow meters. Laboratory exercises will include calibration, repair, documentation and safe work practices associated with level and flow measurement, indicating and recording instruments. Test equipment, setup, calibration, testing, maintenance and safe work practices will be included. Prerequisites: INTC 1301, INTC 1353, and INTC 1315. (3:2-2)

INTC 2330 Troubleshooting (150404)

This course provides an in-depth coverage of the techniques of troubleshooting in a complex instrumented environment. Laboratory exercises require troubleshooting upsets in chemical processes. Topics include examples and discussions of historical, input/output and logical analysis as a methodology for solving problems. Prerequisites: INTC 1315, INTC 1353, INTC 2310, and INTC 2359. (3:2-2)

INTC 2333 Instrumentation & Installation (150404)

This course covers synthesis, application, and integration of instrumentation installation components. Includes a comprehensive final project. It integrates material from previous courses including the process to design, size, install, connect and start up a small pilot plant. Prerequisites: INTC 1353 and INTC 2310. (3:2-2)

INTC 2339 Instrument and Control Review (150404)

This course is an overview of instrument and control technology, stressing preparation for industry employment testing and either the National Institute of Engineering Technologist Certification (level 2) or the Instrumentation Systems and Automatic Certified Control Systems Technician (level I) Certificate (ISA CCST). This course prepares graduating students with the background necessary to take the ISA Technician in Training certification in preparation for industry employment and national testing. Prerequisites: INTC 1353 and INTC 2310. (3:3-0)

Course Descriptions

INTC 2359 Distributive Control Systems (150404)

(Formerly INTC 1371)

This course is a study of the philosophy and application of distributive control systems. Topics include firmware, software, configuration, communications and networking systems required to implement a distributive control strategy. Students learn how the measurement, control data acquisition and data analysis provides for enterprise resource planning and management. An operating system will be used to provide hands-on experience. Prerequisite: INTC 1352 and INTC 2310. (3:2-2)

INTC 2388 Internship Instrumentation Technology/ Technician (150404)

(Formerly INST 2340)

This is a work-based learning experience that enables the student to apply specialized occupational theory, skill and concepts. A learning plan is developed by the college and the employer. In this course students apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology for the occupation and the business/industry. Prerequisite: department chair approval. (3:0-16)

ELPT 2319 Programmable Logic Controllers I (150404)

This course is a study in the fundamental concepts of programmable logic controllers, principles of operation, and numbering systems as applied to electrical controls. Topics include selection, installation, hardware, firmware, software, configuration, communication, networking, programming, documentation, modes of operation, troubleshooting and maintenance. Prerequisites: INTC 1353 and INTC 2310. (3:2-2)

Non-Credit Continuing Education Courses

INTC 1001 Principles of Industrial Measurements: Instrumentation III (150404)

(Continuing Education Course)

This is a study of the principles and devices used for the measurement of control variables such as temperature, pressure, flow, level, and basic control functions. 128 contact hours)

INTC 1003 Introduction to Instrumentation: 1B (150404)

(Continuing Education Course)

This is a survey of the instrumentation field and the professional requirements of the instrumentation technician. Topics include pneumatic, electronic, mechanic and hydraulic systems. (128 contact hours)

INTC 1043 Application of Industrial Automatic Controls: Instrumentation 2A (150404)

(Continuing Education Course)

This is a study of automatic process control including measuring devices, analog and digital instruments, signal transmitters, recorders, alarms, controllers, control valves, and process and instrument drawings. Includes connection and troubleshooting of loops. (90 contact hours)

INTC 1056 Instrumentation Calibration: Instrumentation 4A (150404)

(Continuing Education Course)

This is a study of techniques for calibrating electronic and pneumatic transmitters, controllers, recorders, valves, and valve positioners. It focuses on disassembly, assembly, alignment, and calibration of equipment. (75 contact hours)

INTC 1071 Mounted Instruments: Instrumentation 2B (150404)

(Continuing Education Course)

In this course students improve their skills in using mounted instruments such as relays, timers, counters, switches, analyzers and primary sensing devices. (75 contact hours)

INTC 2031 Instrumentation Trouble Shooting: Instrumentation 4B (150404)

(Continuing Education Course)

This course features a hands-on approach to the techniques of troubleshooting in an operating control system environment. Laboratory exercises require troubleshooting upsets in actual chemical processes. (78 contact hours)

Interior Design

INDS 1411 Fundamentals of Interior Design (500408)

(Formerly INTD 1411)

This is an introduction to the elements and principles of design, the interior design profession, and the interior design problem-solving process. (4:3-3)

INDS 1415 Materials, Methods and Estimating (500408)

(Formerly INTD 1414)

This is a study of materials, methods of construction and installation, and estimating for interior design applications. (4:3-3)

INDS 1445 Commercial Design I (500408)

(Formerly INTD 2416)

This is a study of design principles applied to furniture layout and space planning for commercial interiors. (4:3-3)

INDS 1449 Fundamentals of Space Planning (50008)

(Formerly INTD 2411)

This is a study of residential and light commercial spaces, including programming, codes, standards, space planning, drawings, and presentations. (4:3-3)

INDS 1451 History of Interiors I (500408)

(Formerly INTD 1312)

This course is an historical survey of design in architecture, interiors, furnishings and decorative elements from the ancient cultures through the Italian Renaissance time period and includes a historical survey of antiquities and European styles and periods of architecture, interiors, and furnishings focusing on Egypt, Greece, Italy, Spain, and France. (4:4-0)

INDS 1452 History of Interiors II (500408)

(Formerly INTD 2310)

This course is a multi-cultural historical survey of design in architecture, interiors, furnishings, and decorative elements from the post-Renaissance period to present time and includes a historical survey of English, American, and styles and periods of architecture, interiors, and furnishing focusing on the twentieth century. (4:4-0)

INDS 2386 Internship-Interior Design (500408)

(Formerly INTD 2315)

This course is a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. It offers experience external to the College for an advanced student in a specialized field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented

by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. The course may be repeated if topics and learning outcomes vary. (3:0-9)

INDS 2387 Internship-Interior Design (500408)

(Formerly INTD 2315)

This course is a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. It offers experience external to the College for an advanced student in a specialized field, involving a written agreement between the educational institution and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. The course may be repeated if topics and learning outcomes vary. (3:0-9)

INDS 2407 Textiles for Interior Design (500408)

(Formerly HOEC 146, FSHN 1401)

This is a study of interior design textiles, including characteristics, care, codes, and applications. (4:3-3)

INDS 2413 Residential Design I (500408)

(Formerly INTD 1416)

This is a study of residential spaces, including the identification of client needs, programming, standards, space planning, drawings, and presentations. (4:3-3)

INDS 2421 Presentation Drawing (500408)

(Formerly INTD 2412)

This is an introduction to two- and three-dimensional presentations, including drawings with one- and two-point perspectives, plans, and elevations. (4:3-3)

INDS 2425 Professional Practices for Interior Design (500408)

(Formerly INTD 2414)

This is a study of business practices and procedures for interior designers, including professional ethics, project management, marketing, and legal issues. (4:3-3)

INDS 2431 Commercial Design II (500408)

(Formerly INTD 2413)

This course teaches advanced concepts of specialized commercial interior design projects, including hospitality, corporate, retail, health care, institutional, or other specialized commercial design projects. (4:3-3)

INDS 2435 Residential Design II (500408)

(Formerly INTD 1415)

This is a comprehensive study of complex residential interior design problems, including advanced space planning, specifications, budgets, and presentation renderings. (4:3-3)

International Business and Trade

HMSY 1337 Introduction to Homeland Security (521101)

This course is an overview of homeland security with emphasis on the evaluation of homeland security issues throughout Texas and the United States. An examination of the roles and methods undertaken by government agencies and individuals in response to these issues is part of this course. Prerequisite: Reading level 4. (3:3-0)

IBUS 1300 Global Logistics Management (521101)

This course covers global logistics; management processes, procedures, and regulations used in transportation; physical distribution; warehousing; inventory control; materials handling; packages; plants and warehouse locations; risk management; and networks for logistics, supplies, and information. The course includes decision making and case resolution techniques to solve problems and to develop logistical and information networks for supply chain management appropriate for global operations. Prerequisite: Reading level 4. (3:3-0)

IBUS 1301 Principles of Exports (521101)

This is a study of export management processes and procedures. Topics include documentation, commercial invoices, and traffic procedures, with emphasis on human and public relations, management of personnel, and finance and accounting procedures. Prerequisite: Reading level 4. (3:3-0)

IBUS 1302 Principles of Imports (521101)

This course focuses on the practices and processes of import management operations, including government controls and compliance. It promotes skill development in the preparation and understanding of import documents such as customs invoices, packing lists, and commercial invoices. Prerequisite: Reading level 4. (3:3-0)

IBUS 1305 Introduction to International Business and Trade (521101)

This course in the techniques of entering the international marketplace, emphasizes the impact and dynamics of sociocultural, demographic, economic, technological, and political-legal factors in the foreign trade environment. Topics include patterns of world trade, internationalization of the firm, and operating procedures of the multinational enterprise. Prerequisite: Reading level 4. (3:3-0)

IBUS 1354 International Marketing Management (521101)

This course is an analysis of international marketing strategies using market trends, costs, forecasting, pricing, sourcing and distribution factors covering the development of an international export/import marketing plan. Prerequisite: Reading level 4. (3:3-0)

IBUS 1341 Global Supply Chain Management (521101)

This is a study of international purchasing or sourcing. Topics include the advantages and the barriers of purchasing internationally, global sourcing and procurement technology, and purchasing processes. Emphasizes issues of contract administration, location, and evaluation of foreign suppliers, total cost approach, exchange fluctuations, customs procedures and related topics. Prerequisite: Reading level 4. (3:3-0)

IBUS 2341 Intercultural Management (521101)

(Not Offered after Spring 2009)

This is a study of cross-cultural comparisons of management and communications processes. It emphasizes cultural geographic distinctions and antecedents that affect individual, group, and organizational behavior. Topics may include sociocultural demographic, economic, technological, and political-legal environments of cluster countries and their relationship to organizational communication and decision making. Prerequisite: Reading level 4. (3:3-0)

Course Descriptions

IBUS 2345 Import Customs Regulations (521101)

This is a study of the duties and responsibilities of the licensed customs broker, U.S. Customs and Border Protection Agency and homeland security. Topics include processes for customs clearance including appraisal, bonded warehouse entry, examination of goods, harmonized tariff schedules, fees, bonding, penalties, quotas, immediate delivery, consumption and liquidation, computerized systems, laws, and regulations. Prerequisite: Reading level 4. (3:3-0)

IBUS 2366 Field Experience—International Business (521101)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. Prerequisites: 12 credit hours from IBUS courses: IBUS 1301, IBUS 1302, IBUS 1305, IBUS 2341, IBUS 2345, and 12 credit hours from the following: HRPO 1311, BUSI 2301, MRKG 1311, BUSI 1311, BMGT 1313, ITSC 1309. A GPA of at least 2.0 on prerequisite courses. An interview with the department chair and approval by the professor are required 60 days prior to enrolling. (3:0-21)

IBUS 2367 Field Experience—International Business (521101)

This course is a practicum for general training and field experience in the workplace, emphasizing key components of international business including human resources, management, organizational structure, import and export procedures, and compliance issues. The College, with the employer, develops and documents an individualized plan for the student. Prerequisite: IBUS 2366 and Reading level 4. (3:0-21)

Journalism

(See Communications)

Legal Assistant

(See Paralegal)

Management Development

(See Business Management and International Business and Trade)

Massage Therapy

MSSG 1105 Hydrotherapy/Therapeutic Modalities (513501)

The course covers the use of accepted hydrotherapy and holistic healthcare modalities of external application of temperature for its reflexive effect. It meets the minimum 20 contact hour requirement for licensure. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order of department chair approval. 32 contact hours (1:1-1)

MSSG 1109 Health and Hygiene (513501)

The course is a study of safety and sanitation practices including universal precautions, emphasizing the importance of proper body mechanics, maintaining a healthy lifestyle, maintaining the massage environment, and the advantage of therapeutic relationships is also included. It meets the minimum 20-contact hour requirement for licensure. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 32 contact hours. (1:1-1)

MSSG 1207 Business Practices & Professional Ethics (513501)

The course is a study of physical and financial office practices and marketing, including ethical practices for massage therapists as established by law or regulatory agency. It meets the minimum of 45 contact hour requirement for licensure. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 48 contact hours (2:2-1)

MSSG 1411 Massage Therapy Fundamentals I (513501)

This course is an introduction to the theory and the application of skills necessary to perform Swedish massage to meet the minimum of 125 contact hour requirement for licensure. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 128 contact hours (4:2-6)

MSSG 1413 Anatomy and Physiology for Massage (513501)

This course is an in-depth coverage of the structure and function of the human body, including cell structure and function, tissues, body organization, and the integumentary, skeletal, muscular, nervous, and endocrine systems. It emphasizes homeostasis/wellness

care. It meets the minimum 75 contact hour requirement for anatomy and physiology for licensure. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order of department chair approval. 80 contact hours (4:3-2)

MSSG 2101 Chair Massage (513501)

This course covers therapy and practice of chair massage using proper techniques for a variety of settings. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order of department chair approval. 16contact hours (1:1-0)

MSSG 2186 Internship-Massage Therapy/Therapeutic Massage (513501)

This course is a work-based learning experience that enables the student to apply specialized occupational theory skills and concepts. A learning experience is developed by the college and the employer. It is taken in the last 250 hours of instruction. It is limited to 50 total hours by the Massage Therapy Board. 64 contact hours (The student would stop at 50 hours of massage). Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. (1:0-4)

MSSG 2311 Massage Therapy Fundamentals II (513501)

This course is a continuation of Massage Therapy Fundamentals I. It emphasizes specialized techniques and assessment of client needs to identify a specific plan of care. It completes the requirements for massage techniques for licensure. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 96 contact hours (3:1-5)

MSSG 2314 Pathology for Massage (513501)

This course covers a general discussion of pathologies as they relate to massage therapy, including universal precautions and their management in professional practice. IT also covers etiology, signs, symptoms, and the physiological and psychological reactions to disease and injury. IT meets the minimum 40 contact hour requirement for licensure. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 128 contact hours (3:3-0)

MSSG 2413 Kinesiology for Massage (513501)

This course is an applied study of human kinesiology. Muscle movements and dysfunctions will be discussed and palpated, including theory and practice of functional muscle testing. It meets the minimum 50 contact hour requirement for licensure. Prerequisites and/or co-requisites: Reading level 4 and courses taken in level sequence order or department chair approval. 64 contact hours (4:4-0)

Mathematics

Examinations for the purpose of placement are required of students planning to enroll for the first time in a MATH course. To avoid delay during registration, students are advised to take these examinations prior to the date on which they plan to register. Students may call the Campus Testing Center for the dates on which these placement examinations will be given. Students are advised that MATH 1332 and MATH 1333 courses are not necessarily designed to transfer to a senior college for mathematics credit. However, these courses may be accepted in certain technology or liberal arts degree programs. A student planning to transfer individual mathematics courses to a senior college should follow the MATH sequence of courses or have a firm commitment from a four-year institution for transfer credit. For actual selection of courses, refer to a catalog of the receiving institution and/or confer with a counselor.

MATH 0303 Basic Mathematics (3201045119)

This is an arithmetic course which builds basic skills of addition, subtraction, multiplication and division with whole numbers, fractions and decimals. Additional topics include graphing whole numbers, fractions and decimals on a number line as well as area and perimeter concepts. This course is designed specifically for students who need a review of the basic arithmetic skills or have not yet mastered them. This course is not applicable toward any degree. Prerequisite: Math level 2. (3:2-2)

MATH 0304 Pre-Algebra (3201045119)

(Formerly Developmental Studies 1304, Developmental Mathematics 0304)

This is a pre-algebra course which integrates the study of integers, fractions, decimals, percents, ratio, and proportion with basic algebra. Additional topics covered include measurement, estimation, elementary statistics,

reasoning skills, number relationships, order of operations, and basic geometry. The emphasis in all topics is on their application to real life situations. This course is not applicable toward any degree. (3:3-1)

MATH 0305 Introductory Algebra (3201045119)

(Formerly Mathematics 130, MATH 1305)

This course is a study of the basic algebra of solving and graphing linear equations, inequalities, and systems. Other topics include formulas, literal equations, polynomials, integral exponents, factoring, basic operations of radicals, and rational expressions. Algebraic and basic geometric applications are included. This course promotes critical thinking and provides problem-solving techniques. This course is not applicable toward any degree. Prerequisite: A grade of C or better in MATH 0304 or Math level 6. (3:3-0)

MATH 0306 Intermediate Algebra (3201045212)

(Formerly Mathematics 131, MATH 1306, MATH 1312, Fundamentals of College Mathematics II)

This course is a study of sets, variation, polynomials, exponents, radicals, and functions, studies of quadratic and rational equations and inequalities, as well as graphs of quadratics and other nonlinear equations and inequalities, are also included. The course emphasizes applications in both single- and multi-step real world problems. This course is not applicable toward any degree. Prerequisite: A grade of C or better in MATH 0305 or Math level 7. (3:3-0)

MATH 1314 College Algebra (2701015419)

(Formerly Mathematics 132, MATH 1322)

This is a course covering the following topics: algebraic skills, problem-solving/applications, equations and inequalities, graphing, relations and functions (including exponential and logarithmic), systems of equations, and matrices. Prerequisite: A grade of C or better in Math 0306 or Math level 9. (3:3-0)

MATH 1316 College Trigonometry (2701015319)

(Formerly Mathematics 133, MATH 1323)

This course covers circular functions, identities, trigonometric equations, inverse functions, solution of triangles, graphing, polar coordinates, and complex numbers. Prerequisite: MATH 1314 or approval by department chair. (3:3-0)

MATH 1324 Finite Mathematics (2703015219)

(Formerly Mathematics 135, MATH 1325)

This course covers logic, sets, counting, probability, statistics, relations, functions, linear inequalities, matrices, introduction to linear programming, and applications. Prerequisite: MATH 1314 or approval by department chair. (3:3-0)

MATH 1325 Calculus with Applications (2703015219)

(Formerly Mathematics 136, MATH 1326)

This is an introduction to special concepts and techniques of calculus which are of particular importance in the social and business sciences as well as technical fields. Topics covered include differentiation, integration, applications, sequences and series, concepts of limits, continuity, and maximum and minimum of a function. Prerequisite: MATH 1314 required, MATH 1324 preferred or approval by department chair. (3:3-0)

MATH 1332 College Mathematics for Liberal Arts (2701015119)

This course provides a broad background in the principles of mathematics necessary for understanding and appreciating topics found in other curricula. Topics include mathematical models using polynomial, exponential and logarithmic functions; matrices; probability and statistics; logic; geometry; and mathematics of finance. Prerequisites: A grade of C or better in MATH 0306 or Math level 9. (3:3-0)

MATH 1333 Contemporary Mathematics for Technical Programs (2701015119)

This course provides a broad background in principles and applications of mathematics found in many technical and vocational degree programs. Topics include a survey of sets, logic, number systems, equations (linear, quadratic, rational, exponential and logarithmic); geometry; trigonometry; relations and functions; probability and statistics, matrices, and select applications. This course will satisfy the math requirement of the Associate of Applied Science degree, but does not satisfy the math requirement of the associate of arts, associate of science, or associate of arts in teaching degree. Prerequisite: A grade of C or better in MATH 0305 or Math level 7. (3:3-0)

Course Descriptions

MATH 1342 Statistics (2705015119)

(Formerly Mathematics 239, MATH 2319)

This is an introduction to the use of statistics in business and computer science. Topics include descriptive statistics, probability distributions, estimation and statistical tests, and analysis of variance (ANOVA). Additional topics selected from regression and correlation, and non-parametric statistical methods will be reviewed. Prerequisite: MATH 1314. (3:3-0)

MATH 1350 Fundamentals of Mathematics I (2701015619)

(Formerly MATH 1335, Mathematics 137, MATH 1317)

This course focuses on concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems, with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek EC-8 teacher certification. Prerequisites: MATH 1314. (3:3-0)

MATH 1351 Fundamentals of Mathematics II (2701015619)

(Formerly MATH 1336, Mathematics 138, MATH 1318)

This course focuses on concepts of geometry, probability, and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement, with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek EC-8 teacher certification. Prerequisites: MATH 1314 or approval by the department chair. (3:3-0)

MATH 2312 Precalculus (2701015819)

(Formerly MATH 2312 Elementary Functions Mathematics 231, MATH 2321)

Applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. Also includes topics from analytical geometry such as graphs of conic sections. Prerequisites: MATH 1314 and MATH 1316 or approval by department chair. (3:3-0)

MATH 2318 Linear Algebra (2701016119)

(Formerly Mathematics 235, MATH 2335)

This introductory course covers concepts of finite dimensional vector spaces, linear independence and bases, linear transformations, matrices, determinants, real quadratic forms, eigenvalues and eigenvectors, as well as models and applications of these concepts. Prerequisite: MATH 2413. (3:3-0)

MATH 2320 Differential Equations (2703015119)

(Formerly Mathematics 236, MATH 2336)

This course focuses on differential equations of the first order, linear differential equations, Laplace transforms, existence theorems, nonlinear equations, solution by series, numerical solutions, and applications. Prerequisite: MATH 2414. (3:3-0)

MATH 2413 Calculus I (2701015919)

(Formerly Mathematics 243, MATH 2422)

This course covers limits, continuity, and differentiation of algebraic, trigonometric, and transcendental functions, with applications such as maximum/minimum problems and curve sketching. It also includes the study of definite and indefinite integration of algebraic, trigonometric and transcendental functions with applications such as area under a curve. Prerequisite: MATH 2312 or approval by department chair. (4:4-0)

MATH 2414 Calculus II (2701015919)

(Formerly Mathematics 243, MATH 2423)

This course focuses on techniques and applications of integration, indeterminate forms, improper integrals, infinite and power series, parametric equations, and polar coordinates. Prerequisites: MATH 2413. (4:4-0)

MATH 2415 Calculus III (2701015919)

(Formerly Mathematics 244, MATH 2424)

This course covers differentiation of functions of several variables, multiple integration, vector analysis. Prerequisite: MATH 2414. (4:4-0)

Medical Assisting

MDCA 1254 Certified Medical Assisting Exam Review (510801)

This is preparation for the Certified Medical Assisting (CMA) Exam, including a review of all three components of the CMA exam. It also presents an explanation of how the exam is scored and provides opportunities to take practice exams. Prerequisite: Reading level 4. (2:1-2)

MDCA 1343 Medical Insurance (510801)

Emphasis on accurate ICD-9 and CPT coding of office procedures for payment/reimbursement by a patient or third party. Additional topics may include managed care or medical economics. Prerequisites: Reading level 4. (3:2-2)

MDCA 1348 Pharmacology and Administration of Medications (510801)

This course provides instruction in concepts and application of pharmacological principles. It focuses on drugs classification, principles and procedures of medication administration, mathematical systems and conversions, calculation of drug problems, and medico-legal responsibilities of a medical assistant. Prerequisite: Reading level 4 (3:2-2)

MDCA 1371 Medical Assistant Interpersonal and 1343 Communication Skills (510801)

Emphasis is on the application of basic psychological principles and the study of behavior as they apply to special populations. This course includes topics such as developmental stages of the life cycle; principles of listening; and therapeutic, verbal, and non-verbal communication skills as they relate to the medical assistant role. Prerequisite: Reading level 4. (3:3-0)

MDCA 1417 Procedures in a Clinical Setting (510801)

Emphasis is on patient-centered assessment, examination, intervention, and treatment as directed by a physician. Topics includes vital signs, collection and documentation of patient information, asepsis, minor surgical procedures, and other treatments as appropriate for the medical office. Prerequisite: Reading level 4, MDCA 1220 and MDCA 1371. (4:3-3)

MDCA 1421 Administrative Procedures (510801)

This course focuses on medical office procedures including appointment scheduling, medical records creation and maintenance, phone communications, financial process, coding, billing, collecting, third party reimbursement, credit arrangements, and computer use in the medical office. Prerequisite: Reading level 4. (4:2-6)

MDCA 1560 Clinical (510801)

This is a basic, intermediate, or advanced type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experiences are simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisite: Reading level 4, MDCA 1421, and MDCA 1417. (5:0-15)

Medical Imaging Technology

CTMT 2332 Principles of Computed Tomography (510911)

(Formerly RADT 2335)

An introduction to the concepts and physical principles employed in computed tomography, this course emphasizes interactions between x-rays and matter and reviews concepts of radiation detectors and digital imaging. Current knowledge and theory of the biological effects of x-rays are explored, with an emphasis on how they relate to data acquisition, image production, and control and manipulation of image production. Included also are quality control issues and factors involved in purchasing decisions. Prerequisite or co-requisite: RADR 2340. (3:3-0)

CTMT 2336 Computed Tomography Equipment and Methodology (510911)

(Formerly RADT 2345)

A study of the actual operation and operational control of computed tomographic equipment, this course focuses on routine protocols, image quality, and quality control of computed tomography. Theory and application of computed tomographic equipment and the principles of patient imaging techniques utilizing the equipment are covered. Prerequisites: RADR 2340, CTMT 2332. (3:3-0)

CTMT 2360 Clinical 1–Computed Tomography Technology/ Technician (510911)

(Formerly RADT 2340)

This is advanced health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional, in a clinical setting. Prerequisites: RADR 2340, CTMT 2332. (3:0-15)

CTMT 2361 Clinical 2–Computed Tomography Technology/ Technician (510911)

(Formerly RADT 2350)

A continuation of CTMT 2360, this course also provides advanced health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional in a clinical setting. Prerequisite: CTMT 2360, CTMT 2336. (3:0-15)

MRIT 2330 Principles of Magnetic Resonance Imaging (510911)

(Formerly RADT 2360)

This course builds a foundation of general principles for learning to operate a magnetic resonance imager. It focuses on building a sound understanding of the underlying scientific theory and routine clinical practice leading to magnetic resonance imaging. It emphasizes fundamental principles of magnetism and interactions of living matter with magnetic fields, as well as introducing the concepts and scientific principles employed in magnetic resonance imaging. Prerequisite or co-requisite: RADR 2340. (3:3-0)

MRIT 2334 Magnetic Resonance Equipment and Methodology (510911)

(Formerly RADT 2370)

This course is a study of the actual operation and operational control of magnetic resonance imaging equipment. It emphasizes theory, and application of that theory using magnetic resonance imaging equipment and the principles of patient imaging techniques. Prerequisite: RADR 2340, MRIT 2330. (3:3-0)

MRIT 2360 Clinical 1–Magnetic Resonance Imaging Technology/ Technician (510911)

(Formerly RADT 2365)

This course is an advanced type of health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the work flow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional in a clinical setting. Prerequisite: RADR 2340, MRIT 2330. (3:0-18)

MRIT 2361 Clinical 2–Magnetic Resonance Imaging Technology/ Technician (510911)

(Formerly RADT 2375)

A continuation of MRIT 2360, this course is also advanced health professions work-based instruction that helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing the work flow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by clinical professionals in a clinical setting. Prerequisite: MRIT 2360. Co-requisite: MRIT 2334. (3:0-18)

RADR 1260 Clinical-Medical Radiologic Tech I (510907)

(Formerly RADT 1401)

Instruction provides detailed education, training, work-based experience, and direct patient care, generally at a clinical site (hospital, etc.). This course is an introduction to the clinical environment, with specific tasks to be accomplished during the semester enrolled. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of College faculty. Prerequisite: Acceptance into the medical imaging technology/radiography program. Co-requisite: RADR 1309. (2:0-8)

RADR 1309 Introduction to Radiography and Patient Care (510911)

(Formerly RADT 1401)

This course includes the historical development of radiography, basic radiation protection, an introduction to medical terminology, ethical and legal issues for health care professionals, an orientation to the program and to the health care system, patient assessment, infection control procedures, communication and patient interaction skills, and basic pharmacology. Prerequisite: Acceptance into the medical imaging technology/radiography program. Co-requisite: RADR 1260. (3:3-0)

RADR 1313 Principles of Radiographic Imaging I (510911)

(Formerly XRT 131, MRAD 1311, RADT 1311)

The course analyzes radiographic image qualities and the effects of exposure variables upon each image quality. Prerequisite: Acceptance into the medical imaging technology/radiography program. (3:3-1)

Course Descriptions

RADR 1317 Radiographic Anatomy and Physiology I (510911)

(Formerly RADT 1315)

This course develops the student's ability to relate basic human anatomy and physiology to the image. The localization and intensification of human anatomy on the radiographic image are emphasized. Prerequisite: Acceptance into the Medical Imaging /Radiography Program. (3:3-1)

RADR 1318 Radiographic Anatomy and Physiology II (510911)

This course develops the student's ability to relate comprehensive human anatomy and physiology to the image. The advanced localization and intensification of human anatomy on the radiographic image are emphasized. Prerequisites: RADR 1260, RADR 1309, RADR 1313, RADR 1317, RADR 1411. (3:3-1)

RADR 1360 Clinical-Medical Radiologic Tech II (510907)

(Formerly XRT 133, MRAD 1313, MRAD 1212, RADT 1317)

This course provides instruction, detailed education, training, work-based experience and direct patient care, generally at a clinical site (hospital, etc.). This course is a continuation of student training in the clinical environment, with specific tasks to be accomplished during the semester. Radiographic positioning and exposure are emphasized during evaluation of examinations done by students. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of College faculty. Prerequisite: RADR 126, RADR 1309, RADR 1313, RADR 1317, RADR 1411. (3:0-16)

RADR 1411 Basic Radiographic Procedures (510911)

(Formerly XRT 141, MRAD 1411, RADT 1411)

This course includes an introduction to radiographic positioning terminology, the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of basic anatomy and related pathology. Prerequisite: Acceptance into the Medical Imaging Technology/Radiography Program. (4:3-3)

RADR 2117 Radiographic Pathology (510911)

This is an overview of the disease process and common diseases and their appearance on medical images. Prerequisite: RADR 2213, RADR 2362. Co-requisite: RADR 2335, RADR 2363. (1:1-0)

RADR 2213 Radiation Biological Effects and Protection (510911)

(Formerly XRT 233, MRAD 2313, RADT 2313)

This is a study of the effects of radiation on biological systems, typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure. Prerequisites: RADR 2309, RADR 2333, and RADR 2361. (2:2-1)

RADR 2305 Principles of Radiographic Imaging II (510911)

(Formerly XRT 132, MRAD 1312, RADT 1312)

This is a continuation of the study of radiographic imaging technique formulation, image quality assurance, and the synthesis of all variables in image production. Prerequisites: RADR 1260, RADR 1309, RADR 1313, RADR 1317, RADR 1411. (3:3-1)

RADR 2309 Radiographic Imaging Equipment (510911)

(Formerly XRT 231, MRAD 2311, RADT 2311)

This is a study of the equipment and physics of X-ray production, basic X-ray circuits, basic electricity, magnetism, and interactions between X-rays and matter. Prerequisites: RADR 1360, RADR 2309. (3:3-1)

RADR 2333 Advanced Medical Imaging (510911)

(Formerly XRT 232, MRAD 2312, RADT 2312)

This is an introduction to the use of computers in medical imaging and a survey of specialized imaging modalities. Prerequisites: RADR 2360, RADR 2309. (3:3-0)

RADR 2335 Radiologic Technology Seminar (510911)

(Formerly XRT 234, MRAD 2314, RADT 2314)

This is a capstone course focusing on the synthesis of professional knowledge, skills, and attitudes in preparation for employment and lifelong learning. Prerequisites: RADR 2231, RADR 2362. Co-requisites: RADR 2117, RADR 2363. (3:3-0)

RADR 2340 Sectional Anatomy for Medical Imaging (510911)

(Formerly RADT 2330)

This course presents in-depth coverage of anatomic relationships that are present under various sectional orientations as depicted by computed tomography or magnetic resonance imaging. Prerequisite: ARRT registry eligible or certified in Radiology. (3:3-0)

RADR 2360 Clinical-Medical Radiologic Tech III (510911)

(Formerly XRT 134, MRAD 1314, RADT 1414)

Instruction provides detailed education, training, work-based experience and direct patient care, generally at a clinical site (hospital, etc.). This course is a continuation of the clinical environment, with specific tasks to be accomplished during the semester enrolled. Radiographic positioning and exposure will be emphasized during evaluation of examinations done by students. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of College faculty. Prerequisites: RADR 1360, RADR 1318, RADR 2305, RADR 2401. (3:0-18)

RADR 2361 Clinical-Medical Radiologic Tech IV (510911)

(Formerly XRT 242, MRAD 2412, MRAD 2317, RADT 2417)

Instruction provides detailed education, training, work-based experience and direct patient care, generally at a clinical site (hospital, etc.). This course is a continuation of the clinical environment, with specific tasks to be accomplished during the semester. Radiographic positioning and exposure will be emphasized during evaluation of examinations done by students. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of College faculty. Prerequisites: RADR 2309, RADR 2360. (3:0-18)

RADR 2362 Clinical-Medical Radiologic Tech V (510911)

(Formerly XRT 243, MRAD 2413, RADT 2418)

Instruction provides detailed education, training, work-based experience and direct patient care, generally at a clinical site (hospital, etc.). This course is a continuation of training in the clinical environment, with specific tasks to be accomplished during the semester enrolled. Radiographic positioning and exposure will be emphasized during evaluation of examinations done by students. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of College faculty. Prerequisites: RADR 2333, RADR 2361. (3:0-18)

RADR 2363 Clinical-Medical Radiologic Tech VI (510911)

(Formerly XRT 235, MRAD 2315, RADT 2415)

Instruction provides detailed education, training, work-based experience and direct patient care, generally at a clinical site (hospital, etc.). This course is a continuation of the training in the clinical environment, with specific tasks to be accomplished during the semester. Radiographic positioning and exposure will be emphasized during evaluation of examinations done by students. On site clinical instruction, supervision, evaluation, and placement are the responsibility of College faculty. Prerequisites: RADR 2213, RADR 2362. (3:0-18)

RADR 2401 Intermediate Radiographic Procedures (510911)

(Formerly XRT 142, MRAD 1412, RADT 1412)

This is a continuation of the study of the proper manipulation of radiographic equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of intermediate anatomy and related pathology. Prerequisites: RADR 1260, RADR 1309 RADR 1313, RADR 1317, RADR 1411. (4:3-3)

Medical Laboratory Technology

HPRS 1106 Medical Terminology (510000)

(Formerly MELT 1102)

This is a study of medical terminology, word origin, structure and application. (1:1-0)

HPRS 1191 Special Topics in Allied Health-Clinical Lab Assistant (510000)

Topics address recently identified current events, skills, knowledge and/or attitudes and behaviors pertinent to the occupation and relevant to the professional development of the student. The student learns to utilize critical thinking skills to evaluate relevant journal articles and case studies. Various professional organizations are discussed. The value of continuing education and opportunities such education affords will be stressed. The student is introduced to the computer resources available for the field. Prerequisite: HPRS 1391. (1:1-0).

HPRS 1391 Special Topics in Allied Health-Clinical Lab Assistant (510000)

Topics address recently identified current events, skills, knowledge and/or attitudes and behaviors pertinent to the occupation and relevant to the professional development of the student. The student learns how to perform waived tests and aid the technologists in the clinical laboratory. Topics to be addressed include microbiology, hematology, serology and urinalysis, as well as specimen processing. The importance of safety and patient confidentiality is emphasized. The student learns how to screen donors for blood bank donations. Prerequisite: PLAB 1223. Prerequisite or co-requisite: PLAB 1166. (3:2-2).

MLAB 1201 Introduction to Clinical Laboratory Science (511004)

This is an introduction to clinical laboratory science, including quality control, laboratory math, safety, laboratory equipment, laboratory settings, accreditation, certification, professionalism and ethics. Prerequisite or co-requisite: To enroll in this course, a student must have qualified to enter the Medical laboratory Technology program or have permission from the program director of the Medical Laboratory Technology program. (2:2-1)

MLAB 1227 Coagulation (511004)

This is a course in coagulation theory, procedures, and practical applications. Includes quality control, quality assurance, safety and laboratory procedures which rely on commonly performed manual and/or semi-automatic methods. Prerequisite or co-requisite: MLAB 1201. (2:2-1)

MLAB 1231 Parasitology/ Mycology (511004)

This course is a study of the taxonomy, morphology, and pathogenesis of human parasites and fungi, including the practical application of laboratory procedures, quality control, quality assurance, and safety. Prerequisite: MLAB 2434. (2:2-1)

MLAB 1235 Immunology/Serology (511004)

This course is an introduction to the theory and application of basic immunology, including the immune response, principles of antigen-antibody reactions, and the principles of serological procedures as well as quality control, quality assurance, and safety. Prerequisite or co-requisite: MLAB 1201. (2:2-1)

MLAB 1311 Urinalysis and Body Fluids (511004)

(Formerly MELT 1310)

This course is an introduction to the study of urine and body fluid analysis, Includes the anatomy and physiology of the kidney, physical, chemical, and microscopic examination of urine, cerebrospinal fluid, and other body fluids as well as quality control, quality assurance, and safety. Prerequisite or corequisite: A student must enroll in the Medical Laboratory Technology program. (3:2-2)

MLAB 1415 Hematology (511004)

(Formerly MELT 1411)

This is a study of blood cells in normal and abnormal conditions. Instruction in the theory and practical application of hematology procedures, including quality control, quality assurance, safety, manual and/or automated methods as well as blood cells maturation sequences, and normal and abnormal morphology with associated diseases. Prerequisite or co-requisite: To enroll in this course, a student must have been accepted into the Medical laboratory Technology program or have permission from the department chair. Prerequisite or co-requisite: MLAB 1201. (4:3-4)

MLAB 2166 Practicum I—Medical Laboratory Technician (511004)

(Formerly MELT 2200)

This course provides practical general training and experiences in the workplace. The College and the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The course may be repeated if topics and learning outcomes vary. Prerequisite: MLAB 2434. (1:0-9)

MLAB 2266 Practicum II—Medical Laboratory Technician (511004)

(Formerly MELT 2301)

The course provides practical general training and experiences in the workplace. The College and the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The course may be repeated if topics and learning outcomes vary. Prerequisite: MLAB 2431. (2:0-17)

Course Descriptions

MLAB 2267 Practicum III—Medical Laboratory Technician (511004)

(Formerly MELT 2302)

This course provides practical general training and experiences in the workplace. The College and the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The course may be repeated if topics and learning outcomes vary. Prerequisite: MLAB 2501. (2:0-17)

MLAB 2338 Advanced Topics in Medical Laboratory Technician (511004)

(Formerly MLAB 1391)

In this course students examine the integration of all areas of the clinical laboratory and correlate laboratory test data with diagnostic applications and pathophysiology using critical thinking skills. This capstone course provides the student with the synthesis of knowledge and skills in preparation for professional employment and establishes the framework for continuous growth in the medical laboratory technology field. Prerequisites: MLAB 2434 and MLAB 2266. (3:3-0)

MLAB 2431 Immunohematology (511004)

(Formerly MELT 2411)

This is a study of blood antigens and antibodies. Presents quality control, basic laboratory technique and safety. Includes the principles, procedures and clinical significance of test results in genetics, blood group systems, pre-transfusion testing, adverse effects of transfusions, donor selection and components, and hemolytic disease of the newborn. Prerequisite: MLAB 1235. (4:3-4)

MLAB 2434 Microbiology (511004)

(Formerly MELT 1412)

This course covers instruction in the theory, practical application, and pathogenesis of clinical microbiology, including collection, quality control, quality assurance, safety, setup, identification, susceptibility testing, and reporting results. Prerequisite or co-requisite: To enroll in this course, a student must have passed MLAB 1201, concurrently enrolled in MLAB 1201 or have department chair permission. (4:3-4)

MLAB 2501 Chemistry (511004)

This is an introduction to the principles and procedures of various tests performed in Clinical Chemistry. Presents the physiological basis, principle and procedure, and clinical significance of test results, including quality control and reference values. Includes basic

chemical laboratory technique and safety, electrolytes, acid-base balance, proteins, carbohydrates, lipids, enzymes, endocrine function, and toxicology.

Prerequisite: MLAB 1201. (5:3-6)

PLAB 1166 Practicum Phlebotomy (511009)

This course offers practical, general workplace training supported by an individualized learning plan developed by the employer, the college and the student. Prerequisite: PLAB 1223. (1:0-8)

PLAB 1223 Phlebotomy (511009)

(Formerly MLAB 1223)

This course covers skill development in the performance of a variety of blood collection methods using proper techniques and standard precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children, and infants. Emphasis on infection prevention, proper patient identification, specimen labeling, quality assurance, and specimen handling, processing, accessioning, professionalism, ethics, and medical terminology. Prerequisite and/or co-requisite: None. (2:2-1)

SCIT 1495 Special Topics in Analytical Chemistry (400502)

Topics address recently identified current events, skills, knowledge, and /or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. The course introduces basic chemistry principles such as the periodic classification of elements, structure of matter, chemical bonding, formulas and chemical reactions. It presents properties of acids and bases and their application in the clinical setting. It also includes a brief introduction to organic chemistry and the structures of carbohydrates, lipids and proteins. It relates topics to their significance in the performance of laboratory testing as well as human health and body function. Prerequisite: MLAB 1201. (4:4-0)

Mental Health Services

CMSW 1341 Behavior Modification and Cognitive Disorder (511503)

This is an in depth study of the theories and principles of behavioral science and it promotes skill development in the methods of modifying and controlling behavior in clinical and personal settings. Emphasis on techniques such as managing self-behavior. Topics include

stimulus controls, shaping, relaxation training, reinforcement scheduling, and token economics. The course covers a basic understanding of psychosomatic drugs and their effects on behavior in both treatment and recovery. Prerequisites: Reading level 6, Writing level 6. (3:3-0)

DAAC 1304 Pharmacology of Addiction (511501)

This course covers psychological, physiological, and sociological effects of mood altering substances and behaviors. It emphasizes pharmacological effects of tolerance, dependence/withdrawal, cross addiction, and drug interaction. Prerequisites: Reading level 6, Writing level 6 (3:3-0)

DAAC 1311 Counseling Theories (511501)

This course reviews the major theories and current treatment modalities. Prerequisites: Reading level 6, Writing level 6 (3:3-0)

DAAC 2307 Addicted Family Intervention (511501)

This course studies the family as a dynamic system focusing on the effects of addiction on family roles, rules, and behavior patterns. It includes the effects of mood altering substances, behaviors, and therapeutic alternatives as they relate to the family from a multicultural and transgenerational perspective. Prerequisite: DAAC 1304. (3:3-0)

DAAC 2341 Counseling Alcohol and Other Drug Addictions (511501)

This course focuses on special skills and techniques in the application of counseling skills for treating the Alcohol and Other Drug (AOD) client. It teaches development and utilization of advanced treatment planning and management, and includes a review of confidentiality and ethical issues. Prerequisites: Reading level 6, Writing level 6. (3:3-0)

DAAC 2366 Practicum—Substance Abuse/Addiction Counseling (511501)

This course offers practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and student. Prerequisites: Must complete 28 hours in the program before the practicum. (3:0-21)

DAAC 2366 Practicum—Substance Abuse/Addiction Counseling (511501)

The course provides a practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and the student. Prerequisites: Must complete 28 hours in the program before the practicum (3:0-21)

PMHS 2366 Practicum—Mental Health Services Technician (511502)

Practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and the student. This technical course satisfies a requirement for the Mental Health Technician Certificate of Technology and the Mental Health Clinical Counseling and Psychology Associate of Applied Science, but does not satisfy a psychology requirement for the associate of arts, associate of science or associate of arts in teaching degree. Prerequisites: Must complete 28 hours in the program before the practicum. (3:0-21)

PSYT 1371 Mental Health Legal and Ethical Issues (420201)

This course focuses on concepts of confidentiality, ethics, mental health legislation, and regulation relating to the maintenance and use of mental health and substance abuse information and medical records. Prerequisites: Reading level 6, Writing level 6. (3:3-0)

PSYT 1471 Basic Nursing Skills for Mental Health/Psychiatric Technicians (420201)

This course provides mastery of entry level nursing skills and competencies for a variety of health care settings. Utilization of the nursing process as the foundation for all nursing interventions specific to mental health/psychiatric facilities. Prerequisites: Reading level 6, Writing level 6. (4:2-4)

PSYT 2301 Psychology of Group Dynamics (420601)

In this study of the patterns and dynamics of group interactions, topics include a psychosocial approach to group behavior, structure, types, stages, roles, leadership of group activities, and facilitation. This technical course satisfies a requirement for the Mental Health Technician Certificate of Technology and the Mental Health Clinical Counseling and Psychology Associate of Applied Science, but does not satisfy a psychology requirement for the associate of arts, associate of science or associate of arts in teaching degree. Prerequisite: PSYC 2301. (3:3-0)

PSYT 2321 Crisis Intervention (420601)

This is a study of the principles and theories of assisting the individual in a crisis situation. Topics include coping skills to increase potential reinstatement of equilibrium in an individual's lifestyle and suicide prevention. Prerequisite: PSYC 2301. (3:3-0)

PSYT 2331 Abnormal Psychology (420201)

This is a study of the theories and processes involved in the diagnosis and treatment of mental disorders. Prerequisites: PSYC 2301. (3:3-0)

PSYT 2339 Counseling Theories (420601)

(Not offered after Summer 2007.)

This is an examination of major theories of various treatment modalities. Topics include reality therapy, psychodynamics, grief therapy, person-centered therapy, rational emotive therapy, and cognitive behavioral approaches. Prerequisites: Reading level 6, Writing level 6. (3:3-0)

SCWK 2301 Assessment and Case Management (440701)

Exploration of procedures to identify and evaluate an individual's and/or family's strengths, weaknesses, problems, and need in order to develop an effective plan of action. Topics include oral weaknesses, problems, and needs in order to develop an effective plan of action. Topics include oral and written communications essential for assessment, screening, intervention, prevention, case management and referral. Prerequisites: Reading level 6, Writing level 6. (3:3-0)

SOCW 2361 Introduction to Social Work (4407015124)

This course studies the development of the philosophy and practice of social work in the United States, and is a survey of the fields and techniques of social work. This is an introductory social work course in which students learn about the profession of social work; practice; ethics and values; roles and responsibilities; various fields of social work and practice; diverse client populations; at risk; and the generalist perspective of social work practice. This course also includes a 40-hour integrated agency-related volunteer experience. Prerequisites: Reading level 6, Writing level 6. (3:3-0)

Military Science

(Offered through the University of Houston, Military Science Department)

AFSC 1201 Foundations of United States Air Force I

Introduces the concept of war and the role that the Air Force plays. Students will know the career opportunities available, and the benefits afforded an Air Force member, and develop productive life skills. Basic oral and written communications skills will be demonstrated. The focus is on developing basic knowledge and comprehension of Air Force leadership dimensions while gaining a big picture understanding of ROTC programs, purpose in the Air Force and advantages for the student. (2:1-2)

AFSC 1202 Foundations of United States Air Force II

Explores the basic verbal and written communications skills and an operational understanding of the Air Force core values. Students will know the importance of managing diversity and the concepts and consequences of harassment. The basic concepts of Air Force leadership as well as the concept of effective team building will be developed. Case studies will provide a tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the contemporary operating environment. (2:1-2)

AFSC 2201 The Evolution of USAF Air and Space Power I

Key historical events and milestones in the development of air power as a primary instrument of United States national security. Core values and competencies of leaders in the United States Air Force. Tenets of leadership and ethics. (2:1-2)

AFSC 2202 The Evolution of USAF Air and Space Power II

Overviews the key terms and definitions used to describe air and space power. Students will know the milestone and historical events, leaders, and technological advancements which surround the evolution and employment of USAF air and space power. Basic verbal and written communication skills along with an operational understanding of Air Force Core Values will be demonstrated and ethics. (2:1-2)

Course Descriptions

MSCI 1125 Physical Readiness Training

A physical conditioning class designed to promote high levels of performance on the Army Physical Fitness Test (APFT), and to improve the health, endurance, and strength of the body. This course satisfies the physical education requirement and may be repeated. The course prepares each cadet for the APFT consisting of 2 minutes of push-ups, 2 min. of sit-ups, as well as the two mile run. This class, given by the Military Science Department, uses Army techniques and guidelines during each session. (1:0-1)

MSCI 1131 Advance Physical Fitness Course

A senior level ROTC physical conditioning class designed to promote high levels of performance on the Army Physical Fitness Test (APFT), and to improve the health, endurance, and strength of the body. Emphasis is placed on implementations of the Army's physical fitness program through lecture and practical exercise. Students will also become familiar with Army height, weight, and body fat standards. Participate in three assessment session to track individual improvement and participate as leaders in the conduct of the physical training session in the vicinity of SJCD area. Prerequisite and/or Corequisite: MSCI 1125. (1:0-1)

MSCI 1210 Foundations of Leadership

This course explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army leadership framework. Aspects of personal motivation and team building are practiced planning, executing and assessing team exercises. While participation in the leadership labs is not mandatory during the MSL II year, significant experience can be gained in a multitude of areas and participation in the labs is highly encouraged. The focus continues to build on developing knowledge of the leadership attributes and core leader competencies through the understanding of Army rank, structure, and duties as well as broadening knowledge of land navigation and squad tactics. Case studies will provide a tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the contemporary operating environment. (2:1-2)

MSCI 1211 Foundations of Tactical Leadership

This course examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). This course highlights dimensions of terrain analysis, patrolling, and operation orders. Continued study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations.

This course provides a smooth transition into MSL 301. Cadets develop greater self awareness as they assess their own leadership styles and practice communication and team building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios. (2:1-2)

MSCI 1220 Leadership and Personal Development

This course introduces you to the personal challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student. (2:1-2)

MSCI 1221 Introduction to Tactical Leadership

This course overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. You will explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. (2:1-2)

MSCI 2210:2220 Military Leadership Development

This course focuses on characteristics of leadership, problem analysis, decision making, oral presentations, first aid, small unit tactics, land navigation, basic radio communication, marksmanship, fitness training, rappelling. Fitness training required two times per week in addition to class and lab. (2:0-2)

MSCI 2810 Basic Camp (Formerly MSCI 2410)

No military obligation is associated with this course. Student will not receive credit for both basic course work and Basic Camp. Six week off-campus field training practicum. This course introduces students to the Army and leadership. Prerequisite: Approval of the department chair. (8:0-8)

Music

MUSB 1305 Survey of Music Business (5009098445)

(Formerly MGMT 2329)

This course provides an overview of the music industry including song writing, live performance, the record industry, music merchandising, contracts and licenses, and career opportunities. (3:3-0)

MUSC 1323 Audio Electronics Troubleshooting (100203)

(Formerly MUSC 2343)

This course covers basic concepts in electricity, Ohm's Law, circuit analysis and troubleshooting audio problems. Topics include soldering techniques, audio electronic alignment procedures for tape machines, console maintenance, and sound reinforcement equipment maintenance (3:2-2)

MUSC 1327 Audio Engineering I (100203)

(Formerly MUSI 2371)

This is an overview of the modern recording studio and related personnel. Topics include basic studio electronics and acoustic principles, wave form and analysis, microphone concepts and miking techniques, studio setup and signal flow, recording console theory, signal processing concepts, tape machine principles and operation, and overview of mixing and editing. (3:3-1)

MUSC 1331 Musical Instrument Digital Interface (100203)

This course is an overview of Musical Instrument Digital Interface (MIDI) systems, and applications. Topics include the history and evolutions of MIDI, hardware requirements, computer numbering systems, channels and modes, the MIDI language and typical implementation of MIDI applications in the studio environment using software-based sequencing programs. Prerequisite: MUSI 1301, MUSI 1181. (3:2-2)

Course Descriptions

MUSC 2101 Audio Engineering Practices (100203)

(Formerly MUSI 2173)

This course focuses on practical application of the concepts, techniques, and procedures presented in audio engineering I and audio engineering II. Students are divided into several working units comprised of 3-4 students per unit. Each group is required to complete two recording projects during the semester. May be repeated for credit up to three times if topics and learning outcomes vary. Prerequisite: MUSC 2427. (1:0-3)

MUSC 2355 Musical Instrument Digital Interface II (100203)

This continuation of MIDI I emphasizes advanced sequencer operation and SMPTE-based synchronization in the interaction of multiple recording and playback systems. Topics include synthesis and its relation to software and hardware devices, sampling and sampling manipulation utilizing software sequencers, and sequencing for video. The student will perform advanced MIDI techniques, execute multi machine synchronization and demonstrate advanced use of software based sequencing, synthesis and sampling devices. Prerequisite: MUSC 1331. (3:2-2)

MUSC 2386 Internship-Recording Arts Technology/Technician (100203)

(Formerly MUSI 2375)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training to the student's general technical course of study. The guided external experiences may be for paid or unpaid. The course may be repeated if topics and learning experiences vary. Prerequisites: MUSC 2447, MUSC 2355). (3:0-18)

MUSC 2427 Audio Engineering II (100203)

(Formerly MUSI 2472)

This continuation of audio engineering I emphasizes implementation of techniques and theories of the recording process. Topics include applications of microphones, the audio console, the multi-track tape recorder, and signal processing devices in the recording session environment. Prerequisite: MUSC 1327. (4:3-3)

MUSC 2447 Audio Engineering III (100203)

(Formerly MUSI 2474)

This is a presentation of advanced procedures and techniques utilized in recording and manipulating audio information. Topics include advanced computer-based console automation, hard-disk-based digital audio editing, nonlinear digital multi-track recording, and advanced engineering projects. Prerequisite: MUSC 2427. (4:3-3)

MUSI 1110 Perspective in Jazz (5009025330)

(Formerly Music 117, 1117)

This course discusses topics related to jazz, with special emphasis on its development and contribution to American culture. It is structured for the student interested in jazz music. (1:1-0)

MUSI 1163 Jazz Improvisation I (5009036526)

(Formerly Music 115, 1115)

This course provides background knowledge of basic materials and skills used in improvising jazz solos. Jazz improvisation is structured for any student with a performing medium in music. Prerequisite: Knowledge of all major scales. (1:1-2)

MUSI 1164 Jazz Improvisation II (5009036526)

(Formerly Music 116, 1116)

This is a continuation of MUSI 1163. Prerequisite: MUSI 1163 or professor's approval. (1:1-2)

MUSI 1188 Class Percussion I (5009035126)

This course offers class instruction in the fundamental techniques of playing percussion. The course is designed for the student with little or no background in music, but with the basic information and techniques necessary to read and perform simple repertoire. (1:1-1)

MUSI 1211 Theory of Music I (5009045126)

(Formerly Music 121)

This study of the fundamentals of musicianship includes aspects of notation and part-writing. Prerequisites: Approval of the professor and concurrent enrollment in appropriate ear training course and class piano, unless a waiver is granted by the professor. (2:3-0)

MUSI 1212 Theory of Music II (5009045126)

(Formerly Music 122)

This is a continuation of MUSI 1211. Prerequisite: MUSI 1211 or the professor's approval and concurrent enrollment in an ear training course and class piano. (2:3-0)

MUSI 1216 Ear Training and Sight Singing I (5009045626)

(Formerly Music 123, 1213)

This course provides basic aural, visual and vocal experience in the form of dictation and sight singing. Prerequisites: approval of the professor and concurrent enrollment in an appropriate theory course and class piano. (2:3-0)

MUSI 1217 Ear Training Sight Singing II (5009045626)

(Formerly Music 124, 1214)

This is a continuation of MUSI 1216. Prerequisite: MUSI 1216 or the professor's approval and concurrent enrollment in a theory course and class piano. (2:3-0)

MUSI 1290 Electronic Music (5009045826)

This is an introduction to the use of synthesizers, computers, sequencing, music printing software, multi-track recorders and other MIDI (Music Instrument Digital Interface) devices in notation, arrangement, composition, and performance of music. The course may be repeated once for credit. Prerequisite: MUSI 1301, class or applied piano, or the professor's approval. (2:1-2)

MUSI 1301 Music Fundamentals (5009045526)

(Formerly Music 135)

This course familiarizes students with the meaning of musical notation through the study of scales, chords, and rhythm. It is especially adapted for students preparing to become teachers, and other students who wish to gain a broader knowledge of music. (3:3-0)

MUSI 1306 Listening to Music (5009025126)

(Formerly Music 136, 1302)

This course provides a non-technical approach to the enjoyment of music. Emphasis on an intelligent listening procedure with materials from standard vocal, instrumental and keyboard literature. (3:3-0)

Course Descriptions

MUSI 1307 Survey of Music Literature (5009025226)

(Formerly Music 125, 1215)

This is a course for music majors on the fundamentals of music terminology and standard instrumental and vocal forms. Representative composers and compositions from secular and sacred music of the major eras are studied by means of records and live performance. Prerequisites: Reading level 6. (3:3-0)

MUSI 1310 American Popular Music (5009025326)

This is a study of the evolution of popular American music styles which have proven to be a powerful reflection of American culture. The course provides a survey of music created, performed, and reflective of unique American styles, including jazz, ragtime, New Orleans style, swing and subsequent jazz styles, American folk and popular music, the American musical theater, and rock and roll. (3:3-0)

MUSI 2211 Theory of Music III (5009045226)

(Formerly Music 221)

This is the third course in the music theory sequence covering written and keyboard harmonic analysis. Prerequisites: MUSI 1212 or approval of the professor, and concurrent enrollment in an ear training course and piano. (2:3-0)

MUSI 2212 Theory of Music IV (5009045226)

(Formerly Music 222)

This is the final course in the music theory sequence dealing with Romantic and 20th-century analysis and composition techniques. Prerequisite: MUSI 2211 and concurrent enrollment in ear training course and piano. (2:3-0).

MUSI 2216 Ear Training and Sight Singing III (5009045726)

(Formerly Music 223, MUSI 2213)

This is the continuation of the second-semester course in ear training and sight singing. Prerequisites: MUSI 1217. Co-requisite: Concurrent enrollment in an appropriate theory course and piano. (2:3-0)

MUSI 2217 Ear Training and Sight Singing IV (5009045726)

(Formerly Music 224, MUSI 2214)

This is the final semester of ear training and sight singing and a continuation of MUSI 2216 Prerequisite: MUSI 2216. Co-requisite: Concurrent enrollment in an appropriate theory course and piano. (2:3-0)

Musical Organizations

MUEN 1121 Instrumental Ensemble (5009035526)

(Formerly MUSI 1174)

Membership is open to all students on the basis of audition and/or conference. Instruments may include all orchestra instruments. The instrumental ensemble meets three laboratory hours per week with special rehearsals called as needed. The course may be taken a maximum of six times for credit. (1:0-3)

MUEN 1122 Concert Band (5009035526)

(Formerly Concert Band 111, 112, 211, 212, 213, 214 and MUSI 1171)

Membership is open to all students on the basis of audition and/or conference. Performance literature represents many styles of music. The concert band meets three hours per week, with special rehearsals called as needed. The course may be taken a maximum of six times for credit. (1:0-3)

MUEN 1124 Wind Ensemble (5009035526)

(Formerly MUSI 1173)

Membership is open to all students on the basis of audition and/or conference. Performance literature represents many styles of music, making wind ensemble interesting and enjoyable. The wind ensemble meets three hours per week, with special rehearsals called as needed. The course may be repeated a maximum of six times for credit. (1:0-3)

MUEN 1125 Jazz Ensemble (5009035526)

(Formerly Jazz Band 111, 112, 211, 212, 213, 214 and MUSI 1172)

Membership is open to all students on the basis of audition and/or conference. Instruments in the jazz ensemble include trumpets, trombones, saxophones, clarinets, flutes, piano, bass, guitar and drums. Performance literature represents many styles of music: big band jazz, swing, Latin jazz, and jazz/rock. The jazz ensemble meets three hours per week, with special rehearsals as needed. The course may be taken a maximum of six times for credit. (1:0-3)

MUEN 1131 Small Instrumental Ensemble (5009035626)

(Formerly MUSI 1175)

Membership is open to all students on the basis of audition and/or conference. Instruments in the small instrumental ensemble may vary from semester to semester. The small instrumental ensemble meets three laboratory hours per week, with special rehearsals called as needed. The course may be taken a maximum of six times for credit. (1:0-3)

MUEN 1141 College Choir (5009035726)

(Formerly College Choir 111, 112, 211, 212, 213, 214 and MUSI 1182)

Membership is open to all students on the basis of audition and/or conference. The College choir performs many styles of sacred and secular literature. The course may be taken a maximum of six times for credit. (1:0-3)

MUEN 1143 Concert Choir (5009035726)

(Formerly Concert Choir 111, 112, 211, 212, 213, 214 and MUSI 1181)

Membership is open to all students on the basis of audition. This group has a limited membership which performs serious and entertaining music throughout the semester. Students enrolled in this group are also expected to enroll in the College choir. The course may be taken a maximum of six times for credit. (1:0-3)

MUEN 1154 Small Vocal Ensemble (5009035726)

(Formerly MUSI 1185)

Membership is open to all students on the basis of audition and/or conference. This group has a limited membership which performs serious and entertaining music throughout the semester. Compositions performed may include those for madrigals, duets, trios, quartets, sextets, or other small vocal ensembles. Students enrolled in this course are also expected to enroll in MUEN 1141 (College choir). The course may be taken a maximum of six times for credit. (1:0-3)

MUSI 1159 Music Theater Production (5009036126)

Membership is open to all students on the basis of audition and/or conference. Students enrolled in this course will present a musical theater production at the end of this course and/or will prepare and perform quality musical theater literature. Students with leading roles also will be expected to concurrently enroll in DRAM 1120 (rehearsal and performance). The course may be taken a maximum of two times for credit. (1:0-4.5)

Applied Music Courses

MUSI 1181 Class Piano I (5009075126)

(Formerly PIAN 1181, PIAN 1161)

Beginning class piano equips students with little or no background in music with the basic information and techniques necessary to read and perform simple music at the keyboard. Subsequent classes build upon and refine the information and techniques. (1:1-1)

MUSI 1182 Class Piano II (5009075126)

(Formerly PIAN 1182, PIAN 1162)

This is a continuation of class piano I. (1:1-1)

MUSI 1183 Class Voice I (5009085126)

(Formerly VOIC 1183, VOIC 1161)

Class voice begins with instruction in the fundamentals of correct breathing, tone production and diction. It is a course designed for students with little or no previous training to aid in developing a pleasing tone quality produced with ease and proper enunciation. Additional semesters expand and sharpen these skills in a sequential pattern. (1:1-1)

MUSI 1184 Class Voice II (5009085126)

(Formerly VOIC 1184, VOIC 1162)

This is a continuation of class voice I. (1:1-1)

MUSI 1192 Class Guitar I (5009035126)

Beginning class guitar is intended to develop student skills in applied music theory, sight-reading, performance and technique on the instrument. The class is for beginning-to-intermediate level students with limited experience. (1:1-1)

MUSI 1193 Class Guitar II (5009035126)

This is a continuation of class guitar I. (1:1-1)

MUSI 2181 Class Piano III (5009075126)

(Formerly PIAN 2181, PIAN 2161)

This is a continuation of class piano II. (1:1-1)

MUSI 2182 Class Piano IV (5009075126)

(Formerly PIAN 2182, PIAN 2162)

This is a continuation of class piano III. (1:1-1)

MUSI 2183 Class Voice III (5009085126)

(Formerly VOIC 2183, VOIC 2161)

This is a continuation of class voice II. (1:1-1)

MUSI 2184 Class Voice IV (5009085126)

(Formerly VOIC 2184, VOIC 2162)

This is a continuation of class voice III. (1:1-1)

Applied Music - Private Lessons

Private instruction on instruments and in voice is available to students majoring or minoring in music and to other students who desire to gain or improve proficiency in voice or some instrument. Private lessons are offered for one credit hour at the beginning level or two credit hours at secondary-level or concentration-level. Students are assigned private lessons on the basis of audition and/or counseling by the music faculty. One-credit-hour private lessons meet for one-half hour per week; two-credit-hour private lessons meet for one hour per week. A maximum of 20 credit hours in applied music (all private lessons) may be applied toward a degree. A music major who is not concentrating (or majoring) in piano should enroll in class piano or in a secondary-level piano course, unless the student passes a keyboard barrier exam. Private instruction is available in voice, piano, organ, flute, oboe, clarinet, bassoon, saxophone, French horn, trumpet, baritone, trombone, tuba and percussion instruments. Private instruction in guitar, violin, viola, and string bass is also available. Courses involving private instruction in applied music have certain minimum weekly practice time requirements. For information concerning these requirements, contact the appropriate department chair.

Non-Destructive Testing Technology

(Formerly Welding Inspection Option)

METL 1313 Introduction to Corrosion (150611)

This is an introduction to internal, external, and atmospheric corrosion includes terminology, causes of common corrosion problems in industry, and general remedies such as cathodic protection, protective coatings, material selection, and chemical treatments. (3:2-2)

METL 1405 Welding Metallurgy I (150611)

(Formerly INSP 1521)

This introduction to physical metallurgy and its applications related to welding, includes studies of metal characteristics, testing, effects of alloying and heat treating, and basic properties. Emphasis on conducting tests and metallographic techniques. (4:3-3)

METL 2435 Welding Metallurgy II (150611)

(Formerly INSP 2521)

This is an advanced course in the application of metallurgy principles to processes and procedures pertaining to various metal compositions and fusions. Studies include the metallurgy and selection of filler metal groups, the nature of defects, metal fusion problems, thermal effects in metal fusion, and the welding of various kinds of steel and nonferrous metals. Prerequisite: METL 1405 or approval of the department chair. (4:3-3)

NDTE 1301 Film Interpretation of Weldments (480508)

This study of radiographic film interpretation, including exploration of radiographic basics, interpretation of indications, and causes of indications. Film indications are evaluated according to the structural, piping, and pressure vessel codes. (3:2-2)

NDTE 1410 Liquid Penetrant/Magnetic Particle Testing (480508)

(Formerly INSP 1518)

This is an introduction to the study of non-destructive testing in accordance with SNT-TC-1A materials before and after they are welded. An integral part of the course is the interpretation of non-destructive testing in accordance with building codes in liquid Penetrant and magnetic particle. The theory and operation of magnetic and Penetrant testing methods are stressed. (4:3-3)

NDTE 1440 Eddy Current Testing (480508)

This course on the general principles of eddy current testing, includes theory, knowledge, and skills for basic examination; and effects of material properties, probe types, calibration standards and equipment selection. (4:3-3)

NDTE 1454 Intermediate Ultrasonics (480508)

(Formerly INSP 1528 or METL 1572)

This course focuses on basic theory and applications of ultrasonic techniques of materials testing, covering the theoretical material from the certification test for Ultrasonic level I American Society of Non-Destructive Testing. The testing portion of the course is concerned with the fundamental properties of sound, principles of wave propagation, operation of ultrasonic waves, ultrasonic test equipment, process and techniques. Safety practices, procedures and current development in ultrasonic testing in industrial areas are stressed in relation and application to the metal working industry. (4:3-3)

Course Descriptions

NDTE 2339 Pressure Piping (480508)

(Not offered after Summer 2009)

This course on general principles of pressure vessel inspection covers American Society of Mechanical Engineers (ASME) and American Petroleum Institute (API) documents that pertain to pressure piping inspection. Emphasis on preparing students to take the API 570 certification examination. (3:2-2)

NDTE 2401 Advanced Ultrasonics (480508)

Designed to strengthen the students' knowledge and skills in ultrasonic testing. Emphasis is on examination of plate and pipe welds, characterization of flaws, immersion testing, written practices, and procedures. (4:3-3)

NDTE 2411 Preparation for Welding Inspection (480508)

This course in general principles of welding inspection includes welding processes, terms and definitions, welding discontinuities, duties and responsibilities of inspectors, destructive and non-destructive testing, quality assurance/quality control, welding codes and blueprints, procedures, and case studies. It provides an overview of welding tools and equipment, metallurgy, chemistry, and joint design. (4:3-3).

NDTE 2440 Pressure Vessel Inspection (480508)

(Not offered after Summer 2008)

This course in general principles of pressure vessel inspection and covers American Society of Mechanical Engineers (ASME) and American Petroleum Institute (API) documents that pertain to pressure vessel inspection. Emphasis on preparing students to take the API 510 certification examination. (4:3-3).

NDTE 2470 Pressure Vessel Inspection (480508)

(Not offered after Summer 2008)

This course will provide the general principles of pressure vessel inspection. It will also cover American Society of Mechanical Engineers (ASME) and American Petroleum Institute (API) documents that pertain to pressure vessel inspection. Emphasis will be placed on preparing students to take the API 510 certification examination. (4:3-3)

QCTC 1341 Statistical Process Control (150702)

This course focuses on components of statistics including techniques of collection, presentation, analysis, and interpretation of numerical data as applied to statistical control. Stresses application of correlation methods, analysis of variance, dispersion, sampling quality control, reliability, mathematical models, and programming. (3:2-2)

QCTC 1343 Quality Assurance (150702)

This course in quality assurance principles and applications introduces students to the quality assurance profession. (3:2-2)

QCTC 1446 Introduction to Testing and Inspection Systems (150702)

This study of testing and inspection systems focuses on pertinent specifications, inspection tools, gauges, instruments and mechanisms in illustrating the need for maintaining quality to establish standards. Emphasis placed on applications and on methods of solving quality control and inspection problems using the appropriate testing and inspection methods such as AET, ET, LT, MT, PT, RT, UT and VT. (4:3-3)

QCTC 1448 Metrology & Blueprint Reading (150702)

This is the study of the terminology, methodology, and practice of measurement systems and equipment in the calibration and use of basic measuring tools. (4:3-3).

QCTC 2331 Standards and Codes (150702)

(Formerly QCTC 2431)

This is a study of philosophy and theory of appropriate standards, organizations, and systems integration relating to the standards criteria in society. Emphasis placed on the study of structural, mechanical and application of the ASME, AWS and API codes along with ASTM and MIL-STD. (3:2-2)

WLDG 2380 Cooperative Education–Welding Technology (480508)

This course provides lecture and work-based instruction that helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. Indirect supervision is provided by the work supervisor while the lecture is provided by the College faculty or by other individuals under the supervision of the educational institution. Cooperative education may be a paid or unpaid learning experience. (3:1-20)

Nursing

Nursing (Associate Degree)

RNSG 1108 Dosage Calculations for Nursing (511601)

This study of dosage calculations focuses on reading, interpreting and solving calculation problems encountered in the preparation of medications; and also on conversion of measurements within the apothecary, avoirdupois, and metric systems. This is a prerequisite for admission to the nursing program. This is an 8-week course for two hours per week. (1:1-0)

RNSG 1140 Nursing Skills for the Articulating Student (511601)

This course is to provide validation of current skills and mastery of procedures in a variety of settings; application of a systematic problem solving process and critical thinking skills; focus on the expansion of the scientific knowledge and principles underlying nursing skills and procedures; and competency in knowledge, judgment, skills, and professional values within a legal/ethical framework. This course is a prerequisite for program admission. (1:0-3)

RNSG 1144 Intermediate Nursing Skills (511601)

(Formerly RNSG 1244)

This is a study of the concepts and principles necessary to perform intermediate or advanced nursing skills and demonstrate competence in the performance of nursing procedures. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisite: RNSG 1413. Co-requisites: RNSG 1215, and RNSG 1160. (1:0-4)

RNSG 1160 Clinical Nursing Introduction (511601)

This basic health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional, generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1413. Co-requisite: RNSG 1215, RNSG 1144. (1:0-6)

Course Descriptions

RNSG 1162 Clinical: Concepts of Nursing Practice IIa for the Articulating Student (LVN) (511601)

(Not offered after Fall 2007 [200810])

This intermediate health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisite: RNSG 1209, RNSG 1417, and RNSG 1260. Co-requisite: RNSG 1241. This is an 8-week course for eight hours per week. (1:0-4)

RNSG 1163 Clinical: Concepts of Nursing Pediatric Nursing Practice for the Articulating Student (Paramedic) (511601)

This intermediate health professions work-based instruction helps students synthesize new knowledge, and/or gain experience managing workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1209, RNSG 1417, and RNSG 1260. Co-requisite: RNSG 1249. This is an 8-week course for twelve hours per week. (1:0-6)

RNSG 1166 Practicum, Nursing Transition (511601)

This intermediate or advanced health professions work-based course helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. The emphasis is on practical work experience for which the student has already acquired the necessary theoretical knowledge and basic skills. Direct supervision is provided by a clinical professional, generally a clinical preceptor. A health practicum may be a paid or unpaid learning experience. Prerequisite: BIOL 2401, BIOL 2402, BIOL 2420 or BIOL 2421, ENGL 1301, MATH 1333 or MATH 1314, , PSYC 2314, and PHED. (Prerequisite: for Paramedic to RN includes RNSG 1413.) Co-requisite: RNSG 2207. (1:0-7)

RNSG 1191/1291 Special Topics in Nursing (511601)

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Prerequisite: Admission to the ADN program and approval of the department chair or associate dean. Note: 1-2 credit hours are available on an individual basis. (1 or 2: 0-1 or 2)

RNSG 1209 Introduction to Nursing (511601)

(Formerly RNSG 2207)

This is an overview of nursing and the role of the associate degree nurse as a provider of care, coordinator of care, and member of the profession. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisite: Admission to the ADN mobility program. (2:2-0)

RNSG 1215 Health Assessment (511601)

(Formerly RNSG 1115)

This course promotes development of skills and mastery of techniques required for comprehensive health assessment within a legal/ethical framework. Prerequisites: BIOL 2401, BIOL 2402, BIOL 2420 or BIOL 2421, ENGL 1301 (Central), MATH 1333, or MATH 1314 (Central). Requires approval of the department chair. (2:1-2)

RNSG 1241 Concepts of Nursing Practice IIa for Articulating Students

(Formerly RNSG 1442)

(Not offered after Fall 2007)

This course provides the articulating student the opportunity to examine the roles of the professional nurse and apply systematic problem solving processes and critical thinking skills. It focuses on the utilization of leadership and management skills in the provision of care to small groups of adult clients and their families in selected settings and on the development of competency in knowledge, judgment, skills, and professional values within a legal/ethical framework. The focus of this course will be the care of children. Prerequisites: RNSG 1209, RNSG 1417, RNSG 1260/1360, and RNSG 1360. Co-requisite: RNSG 1162. This is an 8-week course for four hours per week. (2:2-0)

RNSG 1242 Concepts of Nursing Practice IIb for Articulating Students

(Formerly RNSG 1442)

(Not offered after Fall 2007)

This course provides the articulating student the opportunity to examine the roles of the professional nurse and apply systematic problem solving processes and critical thinking skills. It also focuses on the utilization of leadership and management skills in the provision of care to small groups of adult clients and their families in selected settings and competency in knowledge, judgment, skills and professional values within a legal/ethical framework. The focus of this course will be maternal newborn care and women's health. Prerequisites: RNSG 1417, RNSG 1209, RNSG 1260 and RNSG 1360. Co-requisite: RNSG 2160 or RNSG 2161. This is an 8-week course for four hours per week. (2:2-0)

RNSG 1249 Concepts of Pediatric Nursing Practice for the Articulating Student (511601)

(Formerly RNSG 1241)

This course examines the role of the professional nurse and applies systematic problem solving processes and critical thinking skills. It focuses on the utilization of leadership and management skills in the provision of care to small groups of pediatric clients and their families in selected settings. This course lends itself to a blocked approach. Prerequisites: RNSG 1209, RNSG 1417, RNSG 1260/1360. Co-requisite: RNSG 2160 or RNSG 2161. This is an 8-week course for four hours per week. (2:2-0)

RNSG 1251 Care of the Childbearing Families (511601)

This is a study of concepts related to the provision of nursing care of childbearing families. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. Topics may include selected complications. Prerequisites: RNSG 1343, RNSG 1262 and RNSG 1301 and PSYC 2314. Co-requisite: RNSG 1263. (2:2-0)

RNSG 1260 Clinical: Concepts of Nursing Practice I for the Articulating Student (LVN) (511601)

This health related work-based instruction helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing the workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisite: admission to the ADN mobility program. Co-requisite: RNSG 1209, RNSG 1417. (2:0-12)

Course Descriptions

RNSG 1261 Clinical Nursing Common Concepts of Adult Health (511601)

This introductory health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing the workflow in the care of adult clients/families with common medical-surgical health needs related to each body system. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by the clinical professional, generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1413, RNSG 1215, RNSG 1160, and RNSG 1215. Co-requisite: RNSG 1301, RNSG 1341, and PSYC 2314. (2:0-7)

RNSG 1262 Clinical Nursing Complex Concepts of Adult Health (511601)

This intermediate health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing the workflow in the care of adult clients/families with complex medical-surgical health needs associated with each body system. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional, generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1261 and RNSG 1341. Co-requisites: RNSG 1301, RNSG 1343, and PSYC 2314. Prerequisites for transition: RNSG 2207 and RNSG 1166. Co-requisite for transition: RNSG 1343. Prerequisites or co-requisites: RNSG 1301. (2:0-7)

RNSG 1263 Clinical Nursing Care of Childbearing Families (511601)

This intermediate health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing the workflow in the provision of nursing care for childbearing families. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional, generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisite: RNSG 1343, RNSG 1262, RNSG 1301 and PSYC 2314. Co-requisite: RNSG 1251. (2:0-7)

RNSG 1270 Concepts of Maternity/ Newborn and Women's Health Nursing for the Articulating Student (511601)

(Formerly 1242)

This course examines the role of the professional nurse and applies systematic problem solving processes and critical thinking skills. It focuses on the utilization of leadership and marriage skills in the provision of care to small groups of maternity clients and their families in selected settings. This course lends itself to a blocked approach. Prerequisites: RNSG 1417, RNSG 1209, RNSG 1260. Co-requisites: RNSG 2161. This is an 8-week course for four hours per week. (2:2-0)

RNSG 1301 Pharmacology (511601)

(Formerly NURS 1315)

This is an introduction to the science of pharmacology, with emphasis on the actions, interactions, adverse effects, and nursing implications of each drug classification. Topics include the roles and responsibilities of the nurse in safe administration of medication within a legal/ethical framework. Prerequisites: BIOL 2401, BIOL 2402, BIOL 2420 or BIOL 2421 (Central), and must have department chair approval. (3:3-0)

RNSG 1341 Common Concepts of Adult Health (511601)

This is a study of the general principles of caring for selected adult clients and families with common medical-surgical health care needs related to each body system. Emphasis on knowledge, judgment, skills, and professional values within a legal/ethical framework in structured settings. Prerequisites: RNSG 1413, RNSG 1160, RNSG 1215, and RNSG 1144. Co-requisites: RNSG 1301, RNSG 1261 and PSYC 2314. (3:3-0)

RNSG 1343 Complex Concepts of Adult Health (511601)

This course provides integration of previous knowledge and skills related to common adult health needs into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession in the care of adult clients/families in structured health care settings with complex medical-surgical health care needs associated with each body system. Emphasis on knowledge judgment, skills, and professional values within a legal/ethical framework. Prerequisites: RNSG 1341, and RNSG 1261. Co-requisites: RNSG 1301, RNSG 1262 and PSYC 2314. (3:3-0)

RNSG 1360 Clinical: Concepts of Nursing Practice I for the Articulating Student (Paramedic) (511601)

(Not offered after Fall 2007)

This health-related work-based on learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Clinical education is an unpaid learning experience. Prerequisite: Certified licensed paramedic, admission to ADN mobility program. Co-requisite: RNSG 1209, RNSG 1417. (3:0-12)

RNSG 1413 Foundations for Nursing Practice (511601)

This is an introduction to the role of the professional nurse as a provider of care, coordinator of care, and member of the profession. Topics include but are not limited to the fundamental concepts of nursing practice, history of the professional nursing, a systematic framework for decision-making, mechanisms of disease, the needs and problems that nurses help patients manage, and basic psychomotor skills. Emphasis on knowledge judgment, skills, and professional values within a legal/ethical framework. Prerequisites: BIOL 2401, BIOL 2402, BIOL 2420 or BIOL 2421, MATH 1333 OR MATH 1314, and ENGL 1301. Co-requisites: RNSG 1215, and PSYC 2301. Prerequisites for paramedic to RN: BIOL 2401, BIOL 2402, BIOL 2420, MATH 1333 or MATH 1314, ENGL 130, PSYC 2301, PSYC 2314, and PHED. (4:3-3)

RNSG 1417 Concepts of Nursing Practice I for the Articulating Student (511601)

This course provides the articulating student the opportunity to examine the role of the professional nurse and to apply a systematic problem-solving process and critical thinking skills applied to the adult population in selected settings. The course also helps students develop competency in knowledge, judgment, skill, and professional values within a legal/ethical framework. Prerequisite: Admission to ADN mobility program. Co-requisite: RNSG 1260. (4:4-0)

RNSG 2121 Management of Client Care (511601)

This is an exploration of leadership and management principles applicable to the role of the nurse as provider of care, coordinator of care, and member of the profession. It includes application of knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisites or co-requisites: RNSG 2213, RNSG 2261, RNSG 2231, RNSG 2260, RNSG 2201, RNSG 2262, RNSG 1251 and RNSG 1263. Co-requisite: RNSG 2263. (1:1-0)

Course Descriptions

RNSG 2160 Clinical: Concepts of Nursing Practice IIb for the Articulating Student (LVN) (511601)

(Not offered after Fall 2007)

This intermediate health professions work-based instruction helps students synthesize new knowledge and/or gain experience managing workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1209, RNSG 1417 and RNSG 1260. Co-requisite: RNSG 1242. This is an 8-week course for eight hours per week. (1:0-4)

RNSG 2161 Clinical: Concepts of Nursing Practice IIb for the Articulating Student (511601)

This intermediate health professions work-based instruction helps students synthesize new knowledge and/or gain experience managing workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: 1209, RNSG 1417 and RNSG 1260. Co-requisite: RNSG 1270. This is an 8-week course for 12 hours per week. (1:0-6)

RNSG 2162 Clinical: Concepts of Nursing Practice IIIa for the Articulating Student (511601)

This advanced health professions work-based instruction helps students synthesize new knowledge and/or gain experience managing workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1249, RNSG 1270, RNSG 1163 and RNSG 1261. Co-requisite: RNSG 2270. (1:0-6)

RNSG 2163 Clinical: Concepts of Nursing Practice IIIb for the Articulating Student (511601)

This advanced health professions work-based instruction helps students synthesize new knowledge, and/or gain experience managing workflow. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional (faculty or preceptor), generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1249, RNSG 1270, RNSG 1163, and RNSG 1261. Co-requisite: RNSG 2271. This is an 8-week course for 12 hours per week. (1:0-6)

RNSG 2201 Care of Children and Families (511601)

This course teaches students to identify changes which may be experienced by the child/family; utilize critical thinking skills and a systematic problem-solving process as a framework for providing care for the child and the family; and explain the roles of the professional nurse in caring for children and families. Co-requisite: RNSG 2262. Prerequisites: RNSG 1343, RNSG 1262, RNSG 1301, and PSYC 2314. (2:2-0)

RNSG 2207 Transition to Nursing Practice (511601)

This is an introduction to selected concepts related to the role of the associate degree nurse as a provider of care, coordinator of care, and member of the profession. It reviews trends and issues impacting nursing and health care today and in the future. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. Prerequisites: BIOL 2401, BIOL 2402, BIOL 2420 or BIOL 2421, ENGL 1301, MATH 1314 or MATH 1333, PSYC 230, PSYC 2314, and PHED (Prerequisite: for paramedic to RN includes RNSG 1413). Co-requisite: RNSG 1166. (2:2-1)

RNSG 2213 Mental Health Nursing (511601)

This is a course in principles and concepts of mental health, psychopathology, and treatment modalities relating to the nursing care of clients and their families. Prerequisites: RNSG 1262, RNSG 1301, RNSG 1343, and PSYC 2314. Co-requisite: RNSG 2261. (2:2-0)

RNSG 2231 Advanced Concepts of Adult Health (511601)

This course focuses on application of advanced concepts and skills for the development of the professional nurse's roles in complex nursing situations with adult clients/families with complex health needs involving multiple body systems, in intermediate and critical care settings. Emphasis on knowledge, judgment, skills, and professional values within a legal/ethical framework and in intermediate and critical care settings. Prerequisites: RNSG 1343, RNSG 1262, RNSG 1301 and PSYC 2314. Co-requisite: RNSG 2260. (2:2-1)

RNSG 2260 Clinical Nursing Advanced Concepts of Adult Health (511601)

This advanced health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing the workflow in

the care of adult clients/families with complex health needs involving multiple body systems in intermediate and critical care settings. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional, generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1343, RNSG 1262, RNSG 1301 and PSYC 2314. Co-requisite: RNSG 2231. (2:0-7)

RNSG 2261 Clinical Mental Health Nursing (511601)

This intermediate health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, and/or gain experience managing the workflow in mental health nursing. It provides applications of concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional, generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1343, RNSG 1262, RNSG 1301 and PSYC 2314. Co-requisite: RNSG 2213. (2:0-7)

RNSG 2262 Clinical Nursing Care of Children and Families (511601)

This intermediate health professions work-based instruction helps students synthesize new knowledge, apply previous knowledge, or gain experience managing the workflow in the provision of nursing care for the child and family. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional, generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites: RNSG 1343, RNSG 1262, RNSG 1301 and PSYC 2314. Co-requisite: RNSG 2201. (2:0-7)

RNSG 2263 Clinical Nursing Management of Client Care (511601)

This intermediate health professions work-based instruction helps students explore leadership and management principles applicable to the role of the nurse as a provider of care, coordinator of care, and member of a profession. Practical experience is simultaneously related to theory. Close and/or direct supervision is provided by a clinical professional, generally in a clinical setting. Clinical education is an unpaid learning experience. Prerequisites or co-requisites: RNSG 2213, RNSG 2261, RNSG 2231, RNSG 2260, RNSG 2201, RNSG 2262, RNSG 1251, and RNSG 1263. Co-requisite RNSG 2121. (2:0-8)

Course Descriptions

RNSG 2270 Concepts of Mental Health Nursing Practice for the Articulating Student

(Formerly RNSG 2402)

This course provides the articulating student the opportunity to examine the roles of the professional nurse and apply systematic problem solving processes and critical thinking skills. It focuses on the utilization of leadership and management skills in the provision of care to small groups of adult clients and their families in selected settings, and it also stresses competency in knowledge, judgment, skills and professional values within a legal/ethical framework with patients with psychosocial disorders. Prerequisite: RNSG 1242. Co-requisite: RNSG 2162 (2:2-0)

RNSG 2271 Concepts of Advanced Nursing Practice and Management for the Articulating Student

(Formerly RNSG 2402)

This course provides the articulating student the opportunity to examine the roles of the professional nurse and apply systematic problem solving processes and critical thinking skills. It stresses the utilization of leadership and management skills in the provision of care to small groups of adult clients and their families in selected settings, and it also stresses competency in knowledge, judgment, skills and professional values within a legal/ethical framework. The focus of this course will be nursing management and critical care. Prerequisite: RNSG 1270, RNSG 2270, and RNSG 2162. Co-requisite: RNSG 2163. (2:2-0)

Nursing

Vocational Nursing

VNSG 1116 Nutrition (511613)

This is an introduction to nutrients and their role in proper growth and development and the maintenance of health. Prerequisite: department chair/program director approval, Reading level 7, Math level 7, and Writing level 7. Hours: Thirty-two lab hours. (1:0-2)

VNSG 1119 Professional Development (511613)

In this study of the importance of professional growth, topics include the role of the vocational nurse in the multidisciplinary health care team, professional organizations, and continuing education. Prerequisites: Completion of second semester of VNSG, Reading level 7, Math level 7, and Writing level 7. Course must be taken in third semester. Hours: Sixteen lecture hours. (1:1-0)

VNSG 1136 Mental Health (511613)

(Not offered after Fall 2008)

In this introduction to the principles and theories of positive mental health and human behaviors, topics include emotional responses, coping mechanisms, and therapeutic communication skills. Prerequisites: Reading level 7, Math level 7, Writing level 7, and completion of first semester of VNSG courses. Hours: Sixteen lecture hours. (1:1-0)

VNSG 1170 Clinical Prep (511613)

This course is a method of instruction providing detailed education, training, work-based experience, and simulated direct patient/client care in a laboratory setting. This lab-based course prepares students for the beginning experience in nursing care of adult medical-surgical clients and is six weeks in length. Prerequisites: Reading level 7, Math level 7, Writing level 7, and admission into the Vocational nursing program. Co-requisite: Enrollment in VNSG 1323. Successful completion of VNSG 1170 and VNSG 1323 are required prior to taking VNSG 2331 and 1260. If unsuccessful in VNSG 1170 and/or 1323, students are ineligible to continue in VNSG 1227 and the vocational nursing program. This course meets for sixty-four lab hours. (1:0-4)

VNSG 1226 Gerontology (511613)

(Formerly VOCN 2202)

This is an overview of the normal physical, psychosocial, and cultural aspects of the aging process. It addresses common disease processes of the aging and exploration of attitude toward care of the elderly. Prerequisites: Reading level 7, Math level 7, writing level 7 and completion of the first semester of VNSG program. Co-requisite: Concurrent enrollment in VNSG 1262. Hours: Thirty-two lecture hours. (2:2-0)

VNSG 1227 Essentials of Medication Administration (511613)

(Formerly VOCN 1302)

This course focuses on general principles of medication administration, including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs. Instruction covers various systems of measurement. Prerequisites: Admission into VNSG program. Reading level 7, Math level 7, Writing level 7. Co-requisites: Concurrent enrollment with VNSG 2331 and VNSG 1260 is required. Hours: Thirty-two lecture and sixteen lab hours (2:2-1)

VNSG 1230 Maternal-Neonatal Nursing (511613)

(Formerly VOCN 2331)

This course focuses on utilization of the nursing process in the assessment and management of the childbearing family. Emphasis on the bio-psycho-socio-cultural needs of the family during the phases of pregnancy, childbirth, and the neonatal period, including abnormal conditions. Prerequisite: Reading level 7, Math level 7, Writing level 7, and completion of the second semester of VNSG courses. Co-requisites: Concurrent enrollment in VNSG 1234 and VNSG 2261. Hours: Thirty-two lecture hours and sixteen lab hours. (2:2-1)

VNSG 1231 Pharmacology (511613)

(Formerly VOCN 1322)

This course focuses on fundamentals of medications and their diagnostic, therapeutic, and curative effects. It includes the study of nursing interventions utilizing the nursing process. Prerequisites: Reading level 7, Math level 7, Writing level 7, and completion of the first semester of VNSG courses. Co-requisites: Concurrent enrollment in VNSG 1329 and VNSG 1361. Hours: Thirty-two lecture hours and sixteen lab hours. (2:2-1)

VNSG 1234 Pediatrics (511613)

(Formerly VOCN 2331)

This study of childhood diseases and childcare from infancy through adolescence focuses on the care of the well and ill child utilizing the nursing process. Prerequisites: Reading level 7, Math level 7, Writing level 7, and completion of second semester of VNSG courses. Co-requisite: Concurrent enrollment in VNSG 1230 and VNSG 2261. Hours: Thirty-two lecture hours and sixteen lab hours. (2:2-1)

VNSG 1238 Mental Illness (511613)

(Not offered after Fall 2007)

This is a study of human behavior, with emphasis on emotional and mental abnormalities and on modes of treatment incorporating the nursing process. Prerequisites: Reading level 7, Math level 7, Writing level 7, and completion of first semester of VNSG courses. Thirty-two lecture hours. (2:2-0)

VNSG 1260 Clinical I-Practical Nurse (511613)

This course provides detailed instruction, training, and work-based experience in direct patient/client care, generally at a clinical site. This supervised practice provides beginning experience in nursing care of adult medical-surgical clients. It is 10 weeks in length. Prerequisites: Reading level 7, Math level 7, Writing level 7 and admission into the VNSG program and successful completion of VNSG 1323 and VNSG 1160. Co-requisites: Concurrent enrollment in VNSG 2331 and VNSG 1227 is required. Hours: One hundred twenty-eight clinical hours. (2:0-8)

VNSG 1262 Clinical III-Practical Nurse (511613)

(Formerly VOCN 2203)

This course provides detailed instruction, training and work-based experience, and direct patient/client care, generally at a clinical site. This clinical practice offers the student continued experience in the nursing care of adult medical-surgical clients in varied clinical settings. Prerequisites: Reading level 7, Math level 7, Writing level 7, and completion of first semester of VNSG courses. Co-requisite: Concurrent enrollment in VNSG 1226. Hours: One hundred twelve clinical hours. (2:0-8)

VNSG 1301 Mental Health and Illness (511613)

This course includes personal development, human needs, common mental mechanisms, and factors influencing mental health and mental illness. Common mental disorders and related therapy are included. Prerequisites: Reading level 7, Math level 7, Writing level 7, and completion of first semester of VNSG courses. Hours: Forty-eight lecture hours (3:3-0)

VNSG 1320 Anatomy and Physiology for Allied Health (511613)

(Formerly VOCN 1301, VNSG 1420)

This is an introduction to the normal structure and function of the body that focuses the development of an understanding of the relationship of body systems in maintaining homeostasis. Prerequisites: Department chair/program director approval, Reading level 7, Math level 7, and Writing level 7. Forty-eight lecture hours and sixteen lab hours. (3:3-1)

VNSG 1323 Basic Nursing Skills (511613)

(Formerly VOCN 1602)

This course promotes mastery of entry-level nursing skills and competencies for a variety of health care settings. Students practice utilization of the nursing process as a foundation for nursing intervention. Prerequisites: Reading level 7, Math level 7, Writing level 7 or the director/department chair approval, and admission into either the vocational nursing program or the mental health clinical and counseling psychology program. Co-requisite: Concurrent enrollment in VNSG 1160 is required. Successful completion of VNSG 1323 and VNSG 1160 is required prior to taking VNSG 2331 and 1260 and continuing in VNSG 1227 and the VNSG program. Hours: Thirty-two lecture hours and thirty-two lab hours. (3:2-2)

VNSG 1329 Medical-Surgical Nursing I (511613)

(Formerly VOCN 1320)

This course focuses on application of nursing process to the care of adult patients experiencing medical-surgical conditions in the health-illness continuum at a variety of health-care settings are utilized. Prerequisite: Reading level 7, Math level 7, Writing level 7, and completion of first semester VNSG courses. Co-requisite: Concurrent enrollment in VNSG 1231 and VNSG 1361 required. Hours: Forty-eight lecture hours and sixteen lab hours. (3:3-1)

VNSG 1332 Medical-Surgical Nursing II (511613)

(Formerly VOCN 2330)

This is a continuation of medical surgical I focusing on application of the nursing process to the care of adult patients experiencing medical-surgical conditions in the health-illness continuum. Prerequisites: Reading level 7, Math level 7, Writing level 7, and completion of second semester VNSG courses. Co-requisite: Concurrent enrollment in VNSG 2260 course required. Hours: Forty-eight lecture hours and sixteen lab hours. (3:3-1)

VNSG 1361 Clinical II-Practical Nurse (511613)

(Formerly VOCN 1421)

This course provides detailed instruction, training and work-based experience, and direct patient/client care, generally at a clinical site. This clinical practice offers the student continued experience in the nursing care of adult medical-surgical clients. Prerequisites: Completion of first semester VNSG courses, Reading level 7, Math level 7, and Writing level 7. Co-requisite: Concurrent enrollment in VNSG 1231 and VNSG 1329 required. Hours: Two hundred twenty-four clinical hours. (3:0-12)

VNSG 1420 Surgical Technology Anatomy and Physiology for Allied Health (511613)

(Not offered after Fall 2007)

This is an introduction to the normal structure and function of the body, including the relationship of body systems in maintaining homeostasis. Prerequisite: Reading level 7 and Writing level 6. (4:4-0)

VNSG 1423 Basic Nursing Skills (511613)

Mastery of entry level nursing skills and competencies for a variety of health care settings. Utilization of the nursing process as the foundation for all nursing interventions. Prerequisites: Reading level 6, Writing level 6. (4:2-6)

VNSG 2260 Clinical IV-Practical Nurse (511613)

(Formerly VOCN 2210)

This course provides detailed instruction, training, and work-based experience in direct patient/client care, generally at a clinical site. Supervised clinical practice offers students experience in providing nursing care for more complex medical/surgical clients. The course also provides an opportunity to identify leadership and management skills. Prerequisites: Completion of second semester VNSG courses, Reading level 7, Math level 7, and Writing level 7. Co-requisite: Concurrent enrollment in VNSG 1332. Hours: One hundred twelve clinical hours. (2:0-8)

Course Descriptions

VNSG 2261 Clinical V-Practical Nurse (511613)

(Formerly VOCN 2231)

This course provides detailed instruction, training, and work-based experience in direct patient/client care, generally at a clinical site. As an introduction to clinical practice, it offers experience in nursing care in the areas of maternity, pediatrics, and the newborn nursery. Prerequisites: Completion of second semester of VNSG, Reading level 7, Math level 7, and Writing level 7. Co-requisite: Concurrent enrollment in VNSG 1230 and VNSG 1234. Hours: One hundred twelve clinical hours. (2:0-8)

VNSG 2331 Advanced Nursing Skills (511613)

(Formerly VOCN 1602)

This course focuses on mastery of entry-level nursing skills and competencies for a variety of health care settings. Students practice utilization of the nursing process as a foundation for nursing intervention. Prerequisites: Reading level 7, Math level 7, Writing level 7 and admission into the VNSG program. Co-requisite: Concurrent enrollment in VNSG 1260 is required. Successful completion of VNSG 1323 and VNSG 1160 is required prior to taking VNSG 2331 and 1260 and continuing in VNSG 1227 and the VNSG program. Hours: Thirty-two lecture hours and sixty four lab hours. (3:2-4)

Nursing Home Administration

LTCA 1312 Resident Care in the Long-Term Care (51072)

(Formerly Nursing Home Administration 231 or NUHA 2311)

This is a study of the delivery of quality services to residents of long-term care facilities. It provides an overview of the methods for assessing and implementing strategies to promote quality resident care. It includes a presentation of philosophical and ethical considerations. (3:3-0)

LTCA 1313 Organization and Management of Long-Term Care Facilities (510702)

(Formerly Nursing Home Administration 131 or NUHA 1311)

This is an overview of the functional organizational structures common to long-term health care facilities. It includes an examination of the departments in long-term care facilities, chain of command, personnel, regulatory requirements, quality indicators, and role of the long-term care administrator. (3:3-0)

LTCA 2314 Long Term Care Law (510702)

(Formerly NUHA 1313)

This examination of the types and sources of law relating to the long-term care industry, focuses on federal, state, and local statutes and regulations affecting the long-term care industry. (3:3-0)

LTCA 2315 Financial Management of Long-Term Care Facilities (510702)

(Formerly Nursing Home Administration 235 or NUHA 2315)

This is a study of techniques and strategies for gathering and using financial information to make decisions in the long-term care facility. It includes an examination of budget processes, accounting principles, financial statements, and inventory controls. Topics also include the special accounting requirements of Medicare, Medicaid, and other third-party payment systems. (3:3-0)

LTCA 2668 Internship-Long Term Care (510702)

(Formerly Management Development 130, 133, 230, 239 or 2301, Mid-Management 121, 122, 221 or 222, MGTD 2301, MGMT 2375, or BMGT 2368)

This course provides a work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. A learning plan is developed by the College and the employer. The course may be repeated if topics or learning outcomes vary. Prerequisite: Six (6) hours of management courses. (6:1-32)

Occupational Health and Safety Technology

EPCT 1305 Environmental Regulations Overview (150507)

(Formerly EPCT 1205)

This introduction to the history of the environmental movement includes study of basic requirements for compliance with environmental regulations and includes 48 lecture hours. (3:3-0)

EPCT 1307 Introduction to Environmental Safety and Health Technology (150507)

(Formerly OSH 1401)

In this historical overview of environmental safety and health, emphasis is on the use of occupational safety and health codes. The course helps students develop knowledge, skills, attitudes, and behaviors required for safe and environmentally sound work habits. Emphasis on safety, health, and environmental issues in the performance of all jobs, tasks, and regulatory compliance. (3:3-0)

EPCT 1313 Contingency Planning (150507)

In this introduction to the development of an emergency response contingency plan for a facility or community, emphasis is on analyzing hazards, writing and implementing contingency plans, and evaluating the effectiveness of contingency plans. The course also focuses on emergency response concepts. Students who succeed in this will demonstrate appropriate response to emergency situations; recognize hazardous situations for personnel, environment, and community; and apply team skills in response to emergency situations. Forty-eight lecture hours. (3:3-0)

EPCT 1341 Principles of Industrial Hygiene (150507)

(Formerly OHST 2315)

This course focuses on basic concepts in threshold limits, dose response, and general recognition of occupational hazards. Topics include sampling statistics, calibration, and equipment use. Students study the control of occupational hazards and sample collection and evaluation methods. Forty-eight lecture hours. (3:3-0)

EPCT 2333 Environmental Toxicology (150507)

(Formerly OHST 2300)

This is a review of the research determining the systematic health effect of exposures to chemicals. It includes discussion of risk factors, routes of entry, control measures, and acute and chronic effects. Forty-eight lecture hours. (3:3-0)

OSHT 1307 Construction Site Safety and Health (150701)

(Formerly OSHT 1375, OSHT 1305)

This course focuses on construction accident prevention; interpretation of OSHA regulations; general safety requirements; occupational health and environmental controls; fire protection and prevention; signs and other barricades; proper hand tool usage; welding and cutting; electrical hazards; ladders; scaffolding; floors and stairways; cranes; derricks; hoists; elevators and conveyors; motor vehicles and mechanized equipment; excavation, trenching and shoring; and demolition and the use of explosives. (3:3-0)

OSHT 1309 Physical Hazards Control (150701)

(Formerly OHST 1310 and OHST 1315)

This is a study of the common physical hazards in industry and methods of workplace design and redesign to control hazards. Emphasis on the regulation codes and standards associated with the control of physical hazards. The course includes 48 lecture hours. (3:3-0)

OSHT 1313 Accident Prevention, Inspection and Investigation (150507)

(Formerly OHST 2340)

This study of principles and practices provides a basis for understanding the nature of occupational hazard recognition, accident prevention, loss reduction, inspection techniques, and accident investigation analysis and includes 48 lecture hours. (3:3-0)

OSHT 1321 Fire Protection Systems (150701)

(Formerly FIPT 2321)

This study of fire protection systems and their applications, emphasizes the National Fire Protection Association codes and includes 48 lecture hours. (3:3-0)

OSHT 1325 Safety Training Presentation Techniques (150701)

(Formerly FIPT 2325)

This course focuses on general principles of developing and presenting effective industrial/business training. Emphasis on professional qualifications and responsibilities and on principles, methods, and techniques of teaching, including the use of teaching aids and presentation skills and includes 48 lecture hours. (3:3-0)

OSHT 2305 Ergonomics and Human Factors in Safety (150701)

This is a study of the relationship of human behavior and ergonomics as applied to safety and includes 48 lecture hours. (3:3-0)

OSHT 2309 Safety Program Management (150701)

(Formerly OHST 2330)

This is a study of the Occupational Safety and Health Act, cost analysis of accidents, records and record keeping, reporting, job safety analysis, and fundamentals of safety training. It provides an introduction to the Occupational Safety and Health Administration's (OSHA) General Industry Standards and an overview of the more frequently cited violations in recent years and includes 48 lecture hours. (3:3-0)

OSHT 2380 Cooperative Education—Occupational Safety and Health Tech. (150701)

Career-related activities in the student's area of specialization are offered through a cooperative agreement among the College, employer, and student. Under supervision of the College and employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the work experience. Prerequisite: department chair approval. (3:1-14)

OSHT 2401 OSHA Regulations—General Industry (150701)

(Formerly OHST 1305)

This is a study of Occupational Safety and Health Administration (OSHA) regulations pertinent to general industry and includes 64 lecture hours. (4:4-0)

Paralegal

LGLA 1303 Legal Research (220302)

This course provides a working knowledge of the fundamentals of effective legal research. Topics include law library techniques, traditional hardcopy legal research, computer-assisted legal research, briefs, and legal memoranda. Students will locate, read, and use primary and secondary legal authority; design and implement effective legal research strategies; and be familiar with computer-assisted legal research tools and the proper role of each. Pre- or co-requisites: LGLA 1307. (3:3-0)

LGLA 1305 Legal Writing (220302)

This course provides a working knowledge of the fundamentals of effective legal writing. Topics include letters, case briefs, legal memoranda, trial and appellate briefs, case and fact analysis, citation forms, and legal writing styles. The student will write clear concise memoranda and briefs based on legal analysis. Pre- or co-requisites: LGLA 1303, ENGL 1301. (3:3-0)

LGLA 1307 Introduction to Law and The Legal Professions (220302)

(Formerly LEGL 1311)

This course provides an overview of the law and the legal professions. Topics include legal concepts, systems, and terminology; ethical obligations and regulations; professional trends and issues with particular emphasis on the paralegal. Students develop a legal vocabulary, explain fundamental legal concepts and systems, and explain the ethical obligations. Pre- or co-requisites: Reading level 4. (3:3-0)

LGLA 1317 Law Office Technology (220302)

This course introduces computer technology and its applications within the law office. Topics include the use of computer technology in the delivery of legal services, with particular emphasis on the paralegal's role. Prerequisites: Reading level 4. (3:3-1)

LGLA 1345 Civil Litigation (220302)

This course presents fundamental concepts and procedures of civil litigation with emphasis on the paralegal's role. Topics include pretrial, trial, and post-trial phases of litigation. Students define and properly use terminology relating to civil litigation; locate, describe, and analyze sources of law relating to the civil litigation process; describe the role and ethical obligations of the paralegal in civil litigation; and draft documents commonly used in civil litigation. Pre- or co-requisite: LGLA 1307, Reading level 4. (3:3-0)

LGLA 1351 Contracts (220302)

This course presents fundamental concepts of contract law, with emphasis on the paralegal's role. Topics include formation, performance, and enforcement of contracts under the common law; the Uniform Commercial Code; and the Texas Business and Commerce Code. Students define and properly use terminology relating to contract law; locate, describe, and analyze sources of law relating to contract law; describe the role and ethical obligations of the paralegal relating to contract law; and draft documents commonly used in contract law. Pre- or co-requisites: LGLA 1307. (3:3-0)

Course Descriptions

LGLA 1353 Wills, Trusts, and Probate Administration (220302)

(Formerly LEGL 2310)

This course presents fundamental concepts of the law of wills, trusts, and probate administration with emphasis on the paralegal's role. Students define and properly use terminology relating to wills, trusts, and probate administration; locate, describe, and analyze sources of law relating to wills, trusts, and probate administration; describe the role and ethical obligations of the paralegal in wills, trusts, and probate administration; and draft documents commonly used in wills, trusts, and probate administration. Pre- or co-requisite: LGLA 1307, Reading level 4. (3:3-0)

LGLA 1355 Family Law (220302)

(Formerly LEGL 2313)

This course presents fundamental concepts of family law, with emphasis on the paralegal's role. Topics include formal and informal marriages, divorce, annulment, marital property, adoption, and the parent-child relationship. The student will define and properly use terminology relating to family law; locate, describe, and analyze sources of law relating to family law; describe the role and ethical obligations of the paralegal in family law; and draft documents commonly used in family law. Pre- or co-requisites: LGLA 1307, Reading level 4. (3:3-0)

LGLA 1391 Special Topics in Legal Assistant (220302)

This course covers recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to legal assistance and relevant to the professional development of the legal assistant student. Pre- or co-requisites: LGLA 1307. (3:3-0)

LGLA 2303 Torts and Personal Injury Law (220302)

(Formerly LEGL 1315, LGLA 1375)

This course is a study of principles, methods, and investigative techniques utilized to locate, gather, document, and manage information related to tort and personal injury law. Emphasis on developing interviewing and investigative skills to prepare the paralegal to communicate effectively while recognizing ethical problems in this area of the law. Pre- or co-requisites: Reading level 4, LGLA 1307. (3:3-0)

LGLA 2309 Real Property (220302)

This course presents fundamental concepts of real property law with emphasis on the paralegal's role. Topics include the nature of real property, rights and duties of ownership, land use, voluntary and involuntary conveyances, and recording of and searching for real estate documents. Pre- or co-requisites: LGLA 1307, Reading level 4. (3:3-0)

LGLA 2311 Business Organizations (220302)

This course presents basic concepts of business organizations, with emphasis on the paralegal's role. Topics include law of agency; sole proprietorships; and forms of partnerships, corporations, and other emerging business entities. The student will define and properly use terminology relating to business organizations; locate, describe, and analyze sources of law relating to business organizations; describe the role and ethical obligations of the paralegal relating to formation, operation, and termination of the various business entities; describe the formation, operation, and termination of business entities; and draft documents required for the formation, operation, and termination of business entities. Pre- or co-requisites: LGLA 1307. (3:3-0)

LGLA 2313 Criminal Law and Procedure (220302)

(Formerly LEGL 2317)

This course introduces the criminal justice system including procedures from arrest to final disposition, principles of federal and state law, and the preparation of pleadings and motions. The student will define and properly use terminology relating to criminal law; describe sources of law relating to criminal law; locate and analyze cases and statutes relating to criminal law; describe the role and ethical obligations of the paralegal relating to criminal law; and draft documents commonly used in criminal law. Pre- or co-requisites: LGLA 1307, Reading level 4. (3:3-0)

LGLA 2335 Advanced Civil Litigation (220302)

This course implements advanced civil litigation techniques and builds upon skills acquired in Civil Litigation, LGLA 1345. Prerequisites: LGLA 1307, LGLA 1345, Reading level 4. (3:3-0)

LGLA 2388 Internship-Paralegal/Legal Assistant (220302)

(Formerly LEGL 2318)

This course provides experience external to the College for an advanced student in a specialized field involving a written agreement between the College and a business or industry. Monitored and supervised by a workplace employee, the student achieves objectives that are developed and documented by the College and that are directly related to specific occupational outcomes. This may be a paid or unpaid experience. As outlined in the learning plan, the student will master the theory, concepts and skills involving the tools, materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, and legal systems associated with the particular occupational and the business/industry; demonstrate ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry. Prerequisites: Eighteen credit hours of LGLA courses and ENGL 1301. Student must be placed in a position the semester before planning to take this course. The course may be taken a maximum of two times for credit. (3:1-15)

Pharmacy Technician

PHRA 1301 Introduction to Pharmacy (510805)

This course discusses the qualifications, operational guidelines, and duties of a pharmacy technician. Topics include definitions of a pharmacy environment, the profile of a pharmacy technician, legal and ethical guidelines, job skills and duties, verbal and written communication skills, professional resources, safety techniques, and supply and inventory techniques. (3:3-0)

PHRA 1305 Drug Classification (510805)

(Formerly PHRA 1205)

This is a study of pharmaceutical drugs, abbreviations, classifications, dosages, actions in the body, and routes of administration. Emphasis on location of drugs within a pharmacy, inventory control, safety, and quality assurance procedures. Prerequisites: PHRA 1301. (3:3-0)

PHRA 1309 Pharmaceutical Mathematics I (510805)

(Formerly PHRA 1209)

Pharmaceutical mathematics includes reading, interpreting, and solving calculation problems encountered in the preparation and distribution of drugs. Conversion of measurements within the apothecary, avoirdupois, and metric systems, with emphasis on the metric system of weight and volume, will be a focus. Topics include ratio and proportion, percentage, dilution and concentration, milliequivalent units, intravenous flow rates, and solving dosage problems. Prerequisites: PHRA 1301. (3:3-0)

PHRA 1313 Community Pharmacy Practice I (510805)

Mastery of skills necessary to interpret, prepare, label, and maintain records of physicians' medication orders and prescriptions in a community pharmacy is a primary focus. This course trains individuals in the administration of supply, inventory, and data entry. Topics include customer service and advisement, count and pour techniques, prescription calculations, drug selection and preparation, over-the-counter drugs, price labeling, record keeping, stock level adjustment, maintenance of new drug requests, data input and editing, and legal parameters. Pre- or co-requisites: PHRA 1301, 1305, 1309. (3:2-3)

PHRA 1345 IV Admixture and Sterile Compounding (510805)

Mastery of skills in compounding sterile products is emphasized. Topics include introduction to sterile products, hand washing techniques, pharmaceutical calculations, references, safety techniques, aseptic techniques in parenteral compounding, proper use of equipment (auto-injectors, pumps), preparation of sterile products (intravenous, irrigating ophthalmic, total parenteral nutrition, and chemotherapy drugs), and safe handling of anti-neoplastic drugs. Prerequisite: PHRA 1313. (3:2-3)

PHRA 1347 Pharmaceutical Mathematics II (510805)

In-depth continuation of pharmaceutical mathematics I. Addresses ratio and proportion, dilution and concentration, allegations, milliequivalent units and intravenous flow rates. Prerequisite: PHRA 1309. (3:3-0)

PHRA 1349 Institutional Pharmacy Practice (510805)

This course covers exploration of the unique role and practice of pharmacy technicians in an institutional pharmacy with emphasis on daily pharmacy operation. Topics include hospital pharmacy organization, work flow and personnel, medical and pharmaceutical terminology, safety techniques, data entry, packing and labeling operations, extemporaneous compounding, inpatient drug distribution systems, unit dose cart fills, quality assurance, drug storage and inventory control. Prerequisite: PHRA 1313. (3:2-3)

PHRA 1360 Clinical: Community Pharmacy (510805)

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinical professional. Prerequisite: PHRA 1301, 1305, 1309, 1313. (3:0-10)

PHRA 1372 Drug Classification II (510805)

An in-depth continuation of drug classification I with more focus on the study of disease processes, pharmaceutical drugs, abbreviations, classifications, dosages, actions in the body and routes of administration. Prerequisite: PHRA 1305. (3:3-0)

PHRA 1375 Pharmacy Terminology (510805)

This course is a study of word origins and structure through the introduction of prefixes, suffixes and root words as it relates in a pharmaceutical setting. In addition, the student will learn and recognize commonly used pharmacy abbreviations and learn to translate common pharmacy signa (sig) codes. (3:3-0)

PHRA 2360 Clinical: Institutional Pharmacy (510805)

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinical professional. Prerequisite: PHRA 1345, 1347, 1349, 1360, 1375. (3:0-10)

Philosophy

PHIL 1301 Introduction to Philosophy (3801015112)

(Formerly PHIL 2311)

This course provides a general overview of the historical development of the major systems of philosophic thought. Topics discussed include the nature of man, knowledge, morality, social and political theory, and the existence of God. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

PHIL 1304 Introduction to World Religions (3802015212)

Introduction to World Religions is a survey course in philosophy designed to familiarize students with the major theories of world religions. Students establish broad and multiple perspectives of religious theory and evaluate theories of religion. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

PHIL 2303 Logic I (3801015212)

(Formerly Philosophy 1311)

This is a study of the nature and methods of correct reasoning. It focuses on deductive proof, logical fallacies, and valid arguments. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

PHIL 2306 Introduction to Ethics (3801015312)

This course offers a general overview of classical and contemporary theories concerning the good life, human conduct in society, moral and ethical standards; and the nature, criteria, sources, logic, and validity of moral value judgments. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

PHIL 2307 Introduction to Social and Political Philosophy (3801015412)

Social and Political Philosophy is a survey course in philosophy that familiarizes students with the major theories concerning the organization of societies and government. Students establish broad and multiple perspectives of social and political theory, evaluate theories of justice, and learn how to be responsible members of society. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

Course Descriptions

Physical Education/Health Education

Formerly kinesiology, physical education is a general requirement for graduation. Students are expected to complete two semesters of physical education activity, unless excepted by one of the following rules: (1) Veterans or Active Duty military personnel from the U.S. armed forces that have completed basic training; (2) physically handicapped persons who file statements from family physicians stating that the students are physically unable to participate. Only physical education activity courses meet the physical education requirements for graduation, unless otherwise stipulated in the course description. Students may not concurrently enroll in two or more sections of the same physical education activity course. The same activity course may be applied twice toward degree requirements if taken during different semesters.

Physical Education Activity Courses

PHED 1101 Beginning Tennis (3601085123)

(Formerly Physical Education 113, PHED 1103)
This course introduces students to beginning skills and strategies in tennis. Lecture topics include history, rules, strategy (both singles and doubles), etiquette, proper care and selection of equipment, and proper attire. (1:0-3)

PHED 1102 Advanced Tennis (3601085123)

emphasis on instruction of advanced techniques, development of a variety of strokes, singles and doubles strategy in game situations, and USTA tournament rules and procedures. Prerequisite: PHED 1101 or departmental approval. (1:0-3)

PHED 1104 Volleyball (3601085123)

(Formerly Physical Education 114)
Students receive instruction in the skills of passing, setting, spiking, serving, and blocking. Basic offensive and defensive strategies, rules, tournament play, and officiating are covered. (1:0-3)

PHED 1105 Beginning and Intermediate Swimming (3601085123)

(Formerly Physical Education 115)
This course offers explanation, demonstration, and practice in the five basic strokes, diving, survival skills, and basic elements of water safety. (1:0-3)

PHED 1106 Canoeing (3601085123)

(Formerly Physical Education 116)
Lectures, demonstrations and practice in the basic skills and techniques of canoeing are included. A student fee is required. (1:0-3)

PHED 1107 Life Guarding and Life Guard Instruction (3601085123)

(Formerly Advanced Lifesaving, Physical Education 117)
This course provides instruction in life guarding techniques and training for life guard teachers. Successful completion leads to American Red Cross certification. (1:0-3)

PHED 1109 Racquetball (3601085123)

(Formerly Paddleball and Weight Control, Physical Education 119)
This course introduces the student to the rules, terms, safety, basic skills, and strategies necessary to play racquetball. (1:0-3)

PHED 1110 Advanced Racquetball (3601085123)

emphasis on instruction in advanced techniques, stroke development, offensive and defensive strategies in game situations, refereeing, serving techniques and strategies, and tournament play. Prerequisite: PHED 1109 or departmental approval. (1:0-3)

PHED 1111 Bowling (3601085123)

(Formerly Physical Education 211)
This course introduces students to the basic skills and techniques of bowling. Class hours include instruction in etiquette, selection of equipment, basic techniques, scoring, computing handicaps, league play, and a variety of tournaments. This course is conducted off-campus and requires a student bowling fee. (1:0-3)

PHED 1112 Badminton (3601085123)

(Formerly Physical Education 213, Badminton and Archery)
This course features lectures, demonstrations and practice in the basic skills and techniques of badminton. (1:0-3)

PHED 1113 Golf (3601085123)

(Formerly Physical Education 214)
Basic skills in playing golf are stressed. This course also focuses on the rules and etiquette of the game. (1:0-3)

PHED 1114 Jogging (3601085123)

(Formerly Physical Education 311)
Students cardiovascular and overall physical fitness are emphasized using a variety of methods and materials. (1:0-3)

PHED 1116 Water Aerobics (36010851238)

(Formerly Physical Education 314)
Students take part in a total body fitness program including cardiovascular and muscular endurance, strength, and flexibility in the water. Emphasis on improving muscle tone and maintaining a healthy body weight through water fun and fitness activities. (1:0-3)

PHED 1116 Water Aerobics (36010851238)

(Formerly Physical Education 314)
Students take part in a total body fitness program including cardiovascular and muscular endurance, strength, and flexibility in the water. Emphasis on improving muscle tone and maintaining a healthy body weight through water fun and fitness activities. (1:0-3)

PHED 1117 Aerobic Activities (3601085123)

(Formerly Physical Education 315)
This is a cardiovascular conditioning program designed to improve muscle tone and to help maintain a healthy body weight through fun and fitness activities. (1:0-3)

PHED 1118 Advanced Aerobics (3601085123)

This course is an advanced cardiovascular conditioning program. It is designed to increase energy, mental clarity, and health as part of one's lifestyle. The class incorporates high-energy and low-impact movements. Some classes include bench-step aerobics. Prerequisite: PHED 1117 or department approval. (1:0-3)

Course Descriptions

PHED 1119 Exercise for Health and Fitness (3601085123)

(Formerly Physical Education 411)

This course provides students with an essential knowledge of exercise for fitness and health, using lecture, reading, labs on health-related fitness components, and fitness activities. It also provides an understanding of cardiovascular disease, risk factors, and the role of exercise in prevention. Labs include fitness testing, self-assessments, maintenance programs, nutritional analysis, and individualized programs with activities including low-impact aerobics, power walking, bench stepping, toning and flexibility exercises, and weights. (1:0-3)

PHED 1120 Basketball (3601085123)

(Formerly Physical Education 412)

This course teaches basic skills and techniques of basketball. (1:0-3)

PHED 1121 Slow Pitch Softball (3601085123)

(Formerly Physical Education 413)

This course promotes development of basic techniques and skills of slow-pitch softball. (1:0-3)

PHED 1122 Soccer (3601085123)

(Formerly Physical Education 414)

This course offers lectures, demonstrations, and practice in basic skills and techniques of soccer. (1:0-3)

PHED 1123 Weight Training (3601085123)

(Formerly Physical Education 415)

This course offers lectures, demonstrations, and practice in the basic skills and techniques of weight training. (1:0-3)

PHED 1126 Team Sports (3601085123)

(Formerly Physical Education 416, Intramural Activities)

This course provides students with opportunities to participate in a variety of team sports. Volleyball, basketball, flag football, soccer, softball, and floor hockey are included. (1:0-3)

PHED 1130 Modern Dance (3601085123)

(Formerly Physical Education 217)

emphasis on the fundamental techniques of movement, and practice in beginning dance composition. (1:0-3)

PHED 1131 Advanced Modern Dance (3601085123)

(Formerly Physical Education 215, Intermediate Modern Dance)

This course teaches advanced skills and techniques in movement with emphasis on choreography. (1:0-3)

PHED 1133 Beginning Jazz (3601085123)

(Formerly Physical Education 212, Jazz and Tap)

This course focuses on basics and background in varied jazz dance forms, from blues to funky, stressing presentation and exploration to reach creative potential. (1:0-3)

PHED 1134 Yoga I (3601085123)

This course is an introduction to basic yoga postures, breathing, and relaxation techniques with emphasis is on physical practice. (1:0-3)

PHED 1135 Social Dance (3601085128)

This course offers students instruction in the fundamentals of social dance patterns and the more basic ballroom dance steps. (1:0-3)

PHED 1136 Beginning Tap Dance (3601085123)

(Formerly Physical Education 312)

This course teaches fundamentals of beginning tap movement and basic steps, with emphasis on combination and techniques. (1:0-3)

PHED 1137 Beginning Ballet (3601085123)

(Formerly Physical Education 318)

This is an introduction to the theory and terminology of classical ballet, with emphasis on barre technique and centre work. (1:0-3)

PHED 1138 Intermediate and Advanced Ballet (3601085123)

(Formerly Physical Education 319)

This course focuses on theory and terminology of pointe and pas de deux, with greater emphasis is on centre and allegro work. (1:0-3)

PHED 1139 Yoga II (3601085123)

This course is an extension of yoga I and is designed to provide students with expanded knowledge of life management skills by placing emphasis on yoga's strength, flexibility, and stress reduction techniques. Lectures and practice also focus on concentration techniques, nutrition and self-assessment. Prerequisite: Yoga I or instructor approval. (1:0-3)

PHED 1140 Martial Arts (3601085123)

Practice and training in the physical and psychological aspects of self-defense and sport are provided through vigorous flexibility, muscular endurance, and technical instruction. Technical instruction includes martial arts skills, combination tactics, and sparring training using partner drills, solo work, and pad drills. (1:0-3)

PHED 1141 Advanced Jazz (3601085123)

This course is designed for the advanced jazz dance student who wants to develop technical expertise beyond the beginning level of jazz. Prerequisite: PHED 1133. (1:0-3)

PHED 1142 Fitness Swimming (3601085123)

This is a course designed to promote participation in the lifetime sport of swimming. Lectures and practice in the basic swimming strokes will be done. Daily workouts promoting cardiovascular endurance will be emphasized. Students should be good swimmers to take this class. (1:0-3)

PHED 1143 Fitness Walking (360105123)

This course introduces students to walking as a lifetime fitness activity. Emphasis on correct form and pacing to maintain working heart rate. Other topics covered are proper shoe selection, training principles for improved cardiovascular fitness, safety, and injury prevention. (1:0-3)

PHED 1144 Camping (3601085123)

This course includes lectures, demonstrations, practices, and field trips related to camping. Other topics may include hiking, backpacking, and similar areas. (1:0-3)

PHED 1145 Kickboxing for Fitness (2601085123)

Kickboxing is a fitness program designed to improve muscle tone and cardiovascular endurance through constant motion and repetition using martial arts techniques. A variety of combinations and some martial arts applications are taught. (1:0-3)

PHED 1151 Scuba Diving (3601085123)

(Formerly Physical Education 417, Physical Education 1124)

This is a beginning course in scuba diving. Students must furnish their own equipment and must be responsible for qualifying dives. (1:0-3)

Course Descriptions

PHED 1171 Varsity Soccer (South) (3601085128)

Students participate in an advanced level of soccer as a member of the National Junior College Athletic Association. The course will include various systems of play, team defense, and offensive strategy. It may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 1172 Varsity Cheerleading (3601085128)

Varsity cheerleading is designed to prepare a cheerleading squad by providing advanced skills development in cheers, chants, stunts, pyramids, and dance routines for the purpose of promoting school spirit at athletic events and for entertainment at basketball half-times. The course may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 1173 Precision Dance (3601085128)

(Formerly Physical Education 218, 219)

This is a course focusing on skills and techniques of precision group performance and is designed for the experienced performer. The course may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 1174 Varsity Volleyball Women (Central) (3601085128)

(Formerly Physical Education 615, 616, 617, 618)

This is a course designed for skilled volleyball players who are competing on a collegiate level. The course may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 1175 Varsity Basketball Men (Central), Women (North) (3601085128)

(Formerly Physical Education 511, 512, 513, 514)

This is a course designed for skilled basketball players who are competing on a collegiate level. The course may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 1176 Varsity Baseball (North) (3601085128)

(Formerly Physical Education 611, 612, 613, 614)

This is a course designed for skilled baseball players who are competing on a collegiate level. The course may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 1178 Varsity Golf (3601085128)

(Formerly Physical Education 816, 817, 818, 819)

This is a course designed for advanced golfers who are competing on a collegiate level. The course may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 1179 Varsity Tennis (3601085128)

(Formerly Physical Education 911, 912, 913, 914)

This is a course designed for advanced tennis players who are competing on a collegiate level. The course may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 1180 Varsity Softball (South) (3601085128)

This course is designed for advanced softball players who are competing on a collegiate level. Players are selected and prepared to represent the San Jacinto Community College District in the National Junior College Athletic Association, with the opportunity to advance to the regional and national tournaments. This program is governed by the rules of the National Junior College Athletic Association. The course may be taken a maximum of four times for credit. Prerequisite: Professor approval. (1:0-3)

PHED 2140 Advanced Martial Arts (3601085123)

This course provides advanced training in the physical and psychological aspects of street defense situations through vigorous flexibility, muscular endurance, and technical instruction and practice. Technical instruction includes martial arts skills, combinations, and advanced training techniques. In addition, psychological strategies such as cognitive behavior modification, vision-motor behavior rehearsal and stress inoculation training are taught. Prerequisite: PHED 1140 or instructor approval. (1:0-3)

PHED 2155 Emergency Water Safety and Emergency Water Safety Instructor (3601085328)

(Formerly Physical Education 121, PHED 1121, PHED 1125)

Instruction in emergency water safety and teaching techniques for all levels of swimming leads to American Red Cross certification. (1:0-3)

Physical Education

Lecture Course

PHED 1301 Foundations of Physical Education (3105015223)

(Formerly Physical Education 134, PHED 1314)

This fundamental course in physical education provides prospective teachers with a general concept of the philosophy and basic elements of physical education and related areas of health education, recreation, and dance. It is designed for students majoring in physical education. Prerequisites: Reading level 6. (3:3-0)

PHED 1304 Personal/Community Health (5115045316)

(Formerly Health Education 133, Physical Education 133, HEED 1313, HEED 1309)

This investigation of principles and practices in relation to personal and community health is designed for students majoring in health education, allied health science, and elementary education. Prerequisite: Reading level 6. (3:3-0)

PHED 1306 First Aid (5115045316)

(Formerly Health Education 135, Physical Education 135, HEED 1315, HEED 1306)

This course provides instruction in and practice of first aid techniques. Topics covered are general procedures at an accident scene, identifying and treating wounds, poisoning, drug abuse, burns, heart related illnesses, frostbite, hypothermia, sudden illness, bone and joint injuries, shock, bandaging techniques, transport techniques, and cardiopulmonary resuscitation. (3:3-0)

PHED 1308 Officiating Major Sports (1202045109)

(Formerly Physical Education 235, PHED 2315)

This course offers instruction in and application of the fundamentals of sports officiating as they apply to football, volleyball, basketball, softball, and track and field. Students are required to officiate in the intramural program. (3:3-0)

PHED 1332 Recreational and Elementary Game Skills (101015123)

(Formerly Physical Education 231, PHED 2311)

Students participate in basic motor skills, fitness and conditioning activities, tumbling, games, and sports. This course will not satisfy the requirements for one hour of physical education activity. (3:3-0)

Physical Therapist Assistant

PTHA 1201 The Profession of Physical Therapy (510806)

This is an introduction to the profession of physical therapy, including focus on the historical and current scope of physical therapy. (2:2-0)

PTHA 1305 Basic Patient Care Skills (51006)

This is an introduction to the theory and application of basic patient handling functional skills, assessment techniques, and measurement techniques. Prerequisite: PTHA 1201. Co-requisite: PTHA 1413. (3:2-3)

PTHA 1321 (Clinical) Pathophysiology (510806)

This is a study of the pathogenesis, prognosis and therapeutic management of diseases/conditions commonly encountered in physical therapy. Prerequisite: successful completion of PTHA 1431 and PTHA 2409. (3:3-0)

PTHA 1360 Clinical I-PTA (510806)

Instruction provides detailed education, training, work-based experience, and direct patient/client care generally at a clinical site. Specific detailed learning objectives are developed for each student by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the College faculty. The course may be repeated if topics and learning outcomes vary. Prerequisites: PTHA 1431 and PTHA 2409. (3:0-13)

PTHA 1413 Functional Anatomy (510806)

This course provides a study of human anatomy as it relates to the motion of the musculoskeletal system in both normal activities and physical dysfunctions. It also helps students integrate their skills in the kinesiological assessment of the human body. Prerequisite: PTHA 1201. Co-requisite: PTHA 1305. (4:3-4)

PTHA 1431 Physical Agents (510806)

This is a study of the biophysical principles, assessment, and application of therapeutic physical agents, with specific emphasis on indications, contraindications, medical efficacy, and physiological effects. Prerequisite: Successful completion of PTHA 1305 and PTHA 1413. Co-requisite: PTHA 2409. (4:3-4)

PTHA 2239 Professional Issues (510806)

This is a capstone course which engages students in the discussion of professional issues and behaviors related to clinical practice and which prepares them for transition into the workforce. Prerequisite: Successful completion of PTHA 1321. Co-requisites: PTHA 2431 and PTHA 2435. (2:2-0)

PTHA 2409 Therapeutic Exercise (510806)

This course is a critical examination of concepts and application of techniques related to therapeutic exercise and functional training. Prerequisite: Successful completion of PTHA 1305 and PTHA 1413. Co-requisite: PTHA 1431. (4:3-4)

PTHA 2431 Management of Neurological Disorders (510806)

This is an advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected neurological disorders. Prerequisite: Successful completion of PTHA 1321. Co-requisites: PTHA 2435 and PTHA 2239. (4:3-4)

PTHA 2435 Rehabilitation Techniques (510806)

This is an advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected long-term pathologies. Prerequisite: PTHA 1321. Co-requisites: PTHA 2431 and PTHA 2239. (4:3-4)

PTHA 2460 Clinical II-PTA (510806)

This course provides detailed education, training, work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each student by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the College faculty. The course may be repeated if topics and learning outcome vary. Prerequisites: PTHA 2431 and PTHA 2435. Co-requisite: PTHA 2461. (4:0-17)

PTHA 2461 Clinical III-PTA (510806)

This course instruction provides detailed education, training, work-based experience, and direct patient/client care generally at a clinical site. Specific detailed learning objectives are developed for each student by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the College faculty. The course may be repeated if topics and learning outcomes vary. Prerequisites: PTHA 2431 and PTHA 2435. Co-requisite: PTHA 2460. (4:0-17)

Physics

PHYS 1401 College Physics I (4008015303)

(Formerly Physics 241, 2411)

This course is designed primarily to meet the needs of the pre-professional and life science major. Problem-solving techniques without the use of calculus are developed in studying the topics of vectors, kinematics, forces, work and energy, momentum, torque, angular momentum, gravity, properties of solids and fluids, heat and thermodynamics. Prerequisites: MATH 1316 or approval by department chair and Reading level 7. (4:3-3)

PHYS 1402 College Physics II (4008015303)

(Formerly Physics 242, 2412)

In this continuation of PHYS 1401, topics covered are vibration and mechanical waves, sound, electrostatics, electromagnetism, light, optics, lenses and mirrors, relativity, and some quantum physics. Prerequisite: PHYS 1401. (4:3-3)

PHYS 1411 Astronomy I: Planetary (4002015103)

Planetary Astronomy is the first course of a two-semester survey sequence in astronomy, intended for both science and non-science majors. This course examines the history of astronomy, the physics of planetary motion and astronomical observation, the solar system, stars, and planet formation. Lab work includes computer and paper and pencil exercises, laboratory experiments, and assigned nighttime observations. Prerequisites: MATH 1314, Reading level 7, Writing level 7, Math level 9. (4:3-3)

PHYS 1412 Astronomy II: Stellar/Galactic (4002015103)

Stellar/galactic astronomy is the second of a two-semester survey sequence in astronomy, intended for both science and non-science majors. This course examines the history of astronomy, the physics of orbital motion as applied to stellar motion, and astronomical observation, the stars, stellar formation, stellar evolution, deaths of stars, galaxies, galaxy cluster, and cosmology. Lab work includes computer and paper and pencil exercises, laboratory experiments, and assigned nighttime observations. Prerequisites: Math 1314, Reading level 7, Writing level 7, Math level 9. (4:3-3)

Course Descriptions

PHYS 2425 University Physics I (4008015403)

(Formerly Physics 243, 2413)

This course is designed primarily to meet the needs of the pre-engineering student or physics major. Problem solving techniques with the use of calculus are developed in studying the topics of vectors, kinematics, forces, work and energy, momentum, torque, angular momentum, simple harmonic motion, gravity, properties of solids and fluids, heat, and thermodynamics. Prerequisites: MATH 2413 or approval by department chair, and Reading level 7. (4:3-3)

PHYS 2426 University Physics II (4008015403)

(Formerly Physics 244, 2414)

In this continuation of PHYS 2425, the topics covered are vibration and mechanical waves, sound, electrostatics, electricity, dc and ac circuits, magnetism and electromagnetism, light, optics, lenses and mirrors, relativity, and some quantum physics. Prerequisites: MATH 2414 and PHYS 2425. (4:3-3)

Pipefitting

Non-Credit Continuing Education Courses

Pipefitting Certificate PFPB 1001 Introduction to Pipefitting: Pipefitting 1B (460502)

(Continuing Education Course)

This course offers instruction in pipefitting hand and power tools, threaded pipe, ladders and scaffolds, motorized equipment, excavation, underground pipe and installation, drawings and detail sheets, piping systems, and trade math. (128 contact hours)

PFPB 1043 Pipefitting Fabrication and Blueprint Reading: Pipefitting II (460502)

(Continuing Education Course)

This course offers instruction in socket and butt weld pipe fabrication, rigging, pipe hangers and supports, advanced blueprint reading, standards and specifications, and advanced trade math. (128 contact hours)

PFPB 2032 Pipefitting Standards, Specifications, Installation: Pipefitting III (460502)

(Continuing Education Course)

This course promotes skill development related to these areas: motorized equipment, above-ground pipe installation valves, field routing and vessel trim, spring can supports, testing piping systems and equipment, basic plumbing, planning work activities, and non-destructive testing (NDT). (72 contact hours)

PFPB 2033 Pipefitting, Advanced Fabrication and Installation: Pipefitting IV (460502)

(Continuing Education Course)

This course promotes skill development in these areas: advanced pipe fabrication, aligning pipe to rotating equipment, steam traps, inline specialties, special piping, hot taps, and maintaining valves. (72 contact hours)

Plumbing

Non-Credit Continuing Education Courses

PFPB 1001 Basic Pipefitting: Installation and Rigging (Plumbing IIA) (460502)

(Continuing Education Course)

This course offers instruction in threaded pipe and valve installation, rigging, safety procedures, trade math, and blueprint reading. (72 contact hours)

PFPB 1003 Basic Plumbing Skills (460502)

(Continuing Education Course)

In this course students develop skills and knowledge required to install drains, sanitary sewers, water and natural gas supply lines, and fixtures commonly used in residential and light commercial buildings and facilities. (72 contact hours)

PFPB 1071 Plumbing Standards for Water Supplies (460501)

(Continuing Education Course)

This course focuses on the installation of water service from the installation of valves and faucets to connecting to water mains. It covers both residential and commercial settings. (72 contact hours)

PFPB 2031 Advanced Technologies and Specialized Applications for Piping Trades (Plumbing IVB) (460502)

(Continuing Education Course)

This course offers instruction in new plumbing techniques and materials in the pipe trades. Topics include specialized piping/fitting procedures for specific industrial applications and upgrades to techniques and practices designed to deal with federal, state, and local environmental and safety regulations. (72 contact hours)

PFPB 2032 Pipefitting Standards, Specifications, Installation (460502)

(Continuing Education Course)

This course promotes skill development related to these areas: motorized equipment, above-ground pipe installation valves, field routing and vessel trim, spring can supports, testing piping systems and equipment, basic plumbing, planning work activities, and non-destructive testing (NDT). (72 contact hours)

PFPB 2033 Pipefitting, Advanced Fabrication and Installation (Plumbing IIIA) (460502)

(Continuing Education Course)

This course promotes skill development related to these areas: advanced pipe fabrication, aligning pipe to rotating equipment, stream traps, in-line specialties, special piping, hot taps, and maintaining valves. (72 contact hours)

PFPB 2071 Installation and Repair of Potable Water Systems (460501)

(Continuing Education Course)

This course focuses on the plumbing of potable water systems according to local plumbing codes. Methods of filtering and softening water systems are also discussed. (72 contact hours)

Process Technology

(Formerly Chemical Technology)

CTEC 1401 Applied Petrochemical Technology (410301)

(Formerly PROT 1310)

This course offers instruction in the basic principles of physics and their application to process facilities. Topics include physical laws and properties and how these properties relate to the operation of processes. Students define terms and principles of applied physics; solve problems using basic laws of physics; and apply principles of physics to the operation of plant equipment. Prerequisite: MATH 1333. (4:3-3)

CTEC 2386 Internship—Chemical Technology/Technician (150903)

This course is designed to provide advanced students with workplace experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. The student will be assigned an industry mentor who will work with the student's instructor to assure that student learning outcomes are achieved. The instructor will visit the work site to evaluate student progress through interviews with both the student and the industry mentor. This may be paid or unpaid experience. Prerequisites: PTAC 1410. (3:0-18)

PTAC 1302 Introduction to Process Technology (410301)

This is an introduction to the processing industries. This is a survey of all process technology courses in the program. The student will describe the roles, responsibilities, and work environment of a process technician; name basic processes, equipment and systems; describe safety, environmental, and quality concepts. (3:3-0)

PTAC 1308 Safety, Health and Environment I (410301)

(Formerly OSH 2401)

This course promotes development of knowledge and skills to reinforce the attitudes and behaviors required for safe and environmentally sound work habits. Emphasis on safety, health, environmental issues in the performance of all job tasks and regulatory compliance issues. The student will list components of typical plant safety and environmental program; describe the role of a process technician in relation to safety, health, and environment; and identify and describe safety, health, and environmental equipment uses. (3:3-0)

PTAC 1332 Process Instrumentation I (410301)

(Formerly PTAC 1352)

This is a study of the instruments and control systems used in the process industry including terminology, process variables, symbology, control loops, and basic troubleshooting. As part of the course, each student will identify and explain the function of the various instruments used in the process industry, diagram the process control elements in a control loop, and define and apply terms and symbols used in instrumentation. Prerequisite: PTAC 1302. (3:3-1)

PTAC 1350 Industrial Economics (410301)

This course is an examination of the profitability factors of plant operations including personal and business strategies. As part of the course, students will describe plant operations from a business perspective, explain the impact of operation on profitability, and interpret stock market factors and annual reports. Prerequisite: PTAC 2420. (3:3-0)

PTAC 1410 Process Technology I - Equipment (410301)

(Formerly PTAC 2410)

This course provides instruction in the use of common process equipment. As part of the course students identify process equipment components; use appropriate terminology to describe components of process equipment; describe basic functions of process equipment; and relate scientific principles associated with process equipment. (4:3-3)

PTAC 2314 Principles of Quality (410301)

(Formerly PTAC 2314-Quality)

In this study of the background and application of quality concepts, topics include team skills, quality tools, statistics, economics and continuous improvement. As part of the course, students use statistical process control to collect, organize, and analyze data; describe the principles of quality control; demonstrate team skills; and apply quality tools to process systems. Prerequisite: PTAC 1302. (3:3-0)

PTAC 2336 Process Instrumentation II (410301)

This course provides a continued study of the instruments and control systems used in the process industries including terminology, process variables, symbology, control loops, and troubleshooting. The student will utilize instruments in the process industry; diagram the process control elements in a control loop; apply terms and symbols used; apply advanced instrumentation principles and theories to process systems. It is not intended to give the student an understanding equal to that of an instrumentation student, but does offer an overview of how systems are used to control a process. Prerequisite: PTAC 1332. (3:3-1)

PTAC 2348 Safety, Health, and Environment II (410301)

(Formerly OSH 1309)

This course continues instruction in the application of concepts presented in safety, health, and environment I. Emphasis on emergency response concepts. Students demonstrate appropriate response to emergency situations; recognize hazardous situations for personnel, environment, and community; and apply team skills in response to emergency situations. Prerequisite: PTAC 1308. (3:3-0)

PTAC 2420 Process Technology II-Systems (410301)

(Formerly PROT 1422)

This is a study of the various process systems, including related scientific principles. As part of this course, students describe the purpose and function of common process systems; and operate each process system. Prerequisite: PTAC 1410. (4:3-3)

PTAC 2438 Process Technology III-Operations (410301)

(Formerly PROT 2410)

This course emphasizes activities associated with process operations. Students write and follow procedures and operate actual equipment. As a part of this course, students

operate various process systems; work in self-directed teams; write and follow safety and operational procedures; collect and interpret data; and troubleshoot various process problems. Prerequisites: PTAC 2420. (4:3-3)

PTAC 2446 Process Troubleshooting (410301)

(Formerly PROT 2418)

This course offers instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause-effect relationships, and reasoning. Students explain steps in troubleshooting models, demonstrate use of troubleshooting tools, and apply troubleshooting techniques to process problems. The application of computerized process control is a major focus of this course. Prerequisite: PTAC 2420. (4:3-3)

PTRT 1301 Introduction to Petroleum Industry (150903)

(Formerly PTRT 1401, PTRT 1301-Overview of Petroleum)

This is an introduction to the various aspects of petroleum industry including equipment, systems, instrumentation, operations, and the various scientific principles. Addresses a variety of petroleum technologies: exploration, drilling, production, transportation, marketing, and chemical processing industries. Students identify the concepts of exploration, production, refining, marketing, and transportation; and describe the terms and phrases associated with the petroleum industry. Prerequisites: PTAC 2410. (3:3-0)

PTRT 1418 Natural Gas Production (150903)

(Not offered after Summer 2009)

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Students study topics which will include gas treatment, dehydration, produced water treatment and handling, and pumping and transportation systems. Prerequisites: PTAC 2410. (4:3-3)

Course Descriptions

SCIT 1414 Applied General Chemistry (400501)

(Formerly PROT 1311)

This course offers applications of general chemistry emphasizing industry-related laboratory skills and competencies including laboratory safety and report writing. Addresses supporting chemical theories including atomic and molecular structure, nomenclature, chemical reactivity, gas laws, acids and bases, and solutions. The student will demonstrate industry-related laboratory skills including measuring physical and chemical properties of matter, performing chemical calculations, naming and writing relationships; describe basic atomic and molecular structure; write laboratory reports; and apply safe laboratory practices. Prerequisite: Intermediate Algebra. (4:3-3)

Psychology

A student who plans to major in psychology should take the following courses at San Jacinto College for transfer to the university or college of his/her choice: PSYC 2301, PSYC 2317, and PSYC 2319.

PSYC 1300 Foundations for Success (4203015125)

This course provides a study of the research and theory in the psychology of learning, cognition and motivation including factors that impact learning, and applications of learning strategies. Students will be expected to continually integrate and apply skills mastered in this course to become effective and efficient learners. This course is also listed as EDUC 1300; however, students cannot earn credit hours for both PSYC 1300 and EDUC 1300. Prerequisites: Math level 4, Reading and Writing levels 6. (3:3-0)

PSYC 2301 General Psychology (4201015125)

(Formerly Psychology 231, PSYC 2311)

This is a survey of the field of general psychology and a study of the native and acquired controls of human behavior, with emphasis on the mental process and the development of personality. Prerequisite: Reading level 6. (3:3-0)

PSYC 2306 Human Sexuality (4201015325)

This course covers the physical, psychological, and sociological facets of human sexuality. The course exposes students to the various scholarly research in this interdisciplinary field. Emphasis on self-awareness of one's own sexuality and adjustment, the interpersonal aspects of

sexuality, and the social impact that sexual decisions and behavior have on society. This course is also listed as SOCI 2306; however, credit hours are limited to either psychology or sociology. Prerequisites: SOCI 1301 or PSYC 2301; Reading level 7, and Writing level 7. (3:3-0)

PSYC 2308 Child Growth and Development (4207015125)

(Formerly Psychology 233, PSYC 2313)

This is a study of child growth and development, with specific emphasis on the physiological and psychological changes and problems which the child may experience before reaching adolescence. Prerequisites: PSYC 2301, Reading level 7, and Writing level 7. (3:3-0)

PSYC 2314 Lifespan Growth and Development (4207015125)

(Formerly PSYC 2320)

This is a study of the relationship of the physical, emotional, social, and mental factors of growth and development throughout the human life span. Prerequisites: PSYC 2301, Reading level 7, Writing level 7. (3:3-0)

PSYC 2315 Psychology of Adjustment (4201015625)

This course is a study of the processes involved in adjustment of individuals to their personal and social environments. The course focuses on the basic principles and various theories of effective behavior which underlie personal adjustment. It probes the human dilemma, the personal and social context of behavior, the search for values, and methods for personal growth. Prerequisites: PSYC 2301, Reading level 7, and Writing level 7. (3:3-0)

PSYC 2317 Elementary Statistics (4201015225)

(Formerly Psychology 234, PSYC 2314)

This course is a study of the basic statistical concepts and techniques of descriptive and inferential statistics as used in psychological and educational research. Included are frequency distributions and graphs; measures of central tendency and variability; interpretation of individual scores; correlations and prediction; the logic of inferential statistics; t-test; analysis of variance; and some nonparametric statistics including chi square. Prerequisites: PSYC 2301, Reading level 7 and Writing level 7. (3:3-0)

PSYC 2319 Introduction to Social Psychology (4216015125)

(Formerly Psychology 232, PSYC 2312)

This course studies behavior of the individual in the group. Topics include group interaction, leadership, motivation, problems in attitudes, prejudice, prosocial behavior, aggression, love, and environmental influences on behavior and gender identity and sexual behavior. Prerequisites: PSYC 2301, Reading level 7, and Writing level 7. (3:3-0)

Public Service Administration

PBAD 1321 Public Administration (440401)

This is an introduction to the organization and management of the public sector. Topics include intergovernmental relations, overview of different levels of government program management, and management of non-profit agencies. (3:3-0)

PBAD 1341 Governmental Agencies (440401)

This is an overview of governmental agencies and their interrelationships, their goals and objectives, and the organizational structure of each agency. Topics include grants-in-aid, revenue and expenditure patterns, and global influence on governmental agencies. (3:3-0)

PBAD 2301 Public Relations in the Public Sector (440401)

This course promotes skill development in dealing with the public and the media for public sector employees, managers, and public relations specialists. Topics include maintaining a positive public image, relating organizational policies to the public interest, and conducting public information programs. (3:3-0)

PBAD 2311 Public Sector Supervision (440401)

This course promotes skill development in supervisory techniques in public management. Topics include organizational structure, motivation, planning, control, delegation, and leadership. Instructional techniques may include case studies, role playing, and teamwork. (3:3-0)

PBAD 2331 Budgeting in the Public Sector (440401)

This an examination of revenue-producing activities and sources of funds; construction and implementation of budgets; and basic terminology, concepts, and mechanics as they relate to fiscal factors. Topics include budget cycle, taxation, bonds, indebtedness, and funding accounting. (3:3-0)

PBAD 2335 Ethics in the Public Sector (440401)

This course focuses on reconciling the practice of public administration with provisions of the law. Topics include codes of conduct, financial disclosure, conflict of interest, nepotism, and other ethical dilemmas. (3:3-0)

PBAD 2339 Human Resource Management in the Public Sector (440401)

This examination of resource management in the public sector emphasizes civil service, merit systems, and labor law. Topics include recruiting, selecting, training, compensating, and appraising employees. (3:3-0)

PBAD 2347 Urban Planning (440401)

In this examination of urban and regional planning, topics include environmental analysis, growth, and redevelopment strategies, planning, zoning, and subdividing. (3:3-0)

PBAD 2364 Field Experience—Public Administration (440401)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. Prerequisites: Eighteen semester hours credit in Public Service Administration courses and a GPA of 2.0 required in all PBAD courses taken. (3:1-20)

Reading

READ 0308 Basic Reading Skills (3201085212)

(Formerly Special Services 131, DEVS 1301 and 1308)

This course is designed to improve basic reading skills. Following assessment, students are taught word recognition, basic vocabulary skills, and literal comprehension, focusing on concepts such as main idea and details. This course is not applicable to any degree. Prerequisite: Reading level 2. (3:3-2)

READ 0309 Reading Comprehension (3201085212)

(Formerly DEVS 1309)

This intermediate reading course is designed to continue the sequential process of reading instruction with emphasis on reading comprehension and vocabulary development. Selected readings are used for intensive work in literal and inferential meanings. This course is not applicable to any degree. Prerequisite: A grade of C or above in READ 0308 or Reading level 4. (3:3-1)

READ 0310 College Reading Techniques (3201085212)

(Formerly Special Services 132, DEVS 1302 and 1310)

This course is designed for the development of reading skills beyond the basics (on an individual basis). Emphasis on further development of comprehension, vocabulary, interpretation of nonfiction articles, and reading speed. This course is not applicable to any degree. Prerequisite: A grade of C or above in READ 0309 or Reading level 6. (3:3-0)

READ 0311 Speed Reading (3201085212)

(Formerly DEVS 1303 and READ 1311)

This course is designed primarily for students who read at or above the 12th grade reading level. Emphasis on increased comprehension, reading speed, critical reading, vocabulary expansion, and reading flexibility. This course is for personal enrichment; it is not part of the sequential reading program, nor does it transfer as credit toward any degree. Prerequisite: Reading level 7. (3:3-0)

Real Estate

RELE 1201 Principles of Real Estate I (521501)

(Formerly RELE 1301)

A beginning overview of licensing as a real estate broker or salesperson. Includes ethics of practice as a license holder, titles to and conveyance of real estate, legal descriptions, deeds, encumbrances and liens, distinctions between personal and real property, appraisal, finance and regulations, closing procedures, and real estate mathematics. Covers at least three hours of classroom instruction on federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment. Fulfills at least 30 of 60 hours of required instruction for salesperson license. (2:2-0)

RELE 1238 Principles of Real Estate II (521501)

A continuing overview of licensing as a broker or salesperson. Includes ethics of practice as a license holder, titles to and conveyance of real estate, legal descriptions, deeds, encumbrances and liens, distinctions between personal and real property, appraisal, finance and regulations, closing procedures, and real estate mathematics. Covers at least three hours of classroom instruction on federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment. Fulfills at least 30 of 60 hours of required instruction for salesperson license. (2:2-0)

RELE 1303 Real Estate Appraisal (521501)

(Formerly Real Estate 232, REAE 2312, REAL 2312)

The study of the central purposes and functions of an appraisal, social and economic determinants of value, appraisal case studies, cost, market data and income approaches to value estimates, final correlations, and reporting. Prerequisite or co-requisite: RELE 1201 or department chair approval. (3:3-0)

RELE 1307 Real Estate Investments (521501)

(Formerly REAE 2319, and REAL 2319)

This study of characteristics of real estate investments focuses on techniques of investment analysis, time-valued money, discounted and non-discounted investment criteria, leverage, tax shelters, depreciation, and applications to property tax. Prerequisite or co-requisite: RELE 1201 or department chair approval. (3:3-0)

RELE 1309 Real Estate Law (521501)

(Formerly Real Estate 233, REAE 2313, REAL 2313)

A study in legal concepts of real estate, land description, real property rights, estates in land, contracts, conveyances, encumbrances, foreclosures, recording procedures, and evidence of title. Prerequisite or co-requisite: RELE 1201 or department chair approval. (3:3-0)

RELE 1311 Law of Contracts (521501)

(Formerly REAL 1303)

This course focuses on elements of a contract, offer and acceptance, statute of frauds, specific performance and remedies for breach, unauthorized practice of law, commission rules relating to use of adopted forms, and owner disclosure requirements. (3:3-0)

RELE 1319 Real Estate Finance (521501)

(Formerly REAL 2314)

The study of monetary systems, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative financial instruments, equal credit opportunity laws affecting mortgage lending, Community Reinvestment Act, and the state housing agency. (3:3-0)

Course Descriptions

RELE 1321 Real Estate Marketing (521501)

(Formerly REAE 2318, REAL 2318)

The study of real estate professionalism and ethics; characteristics of successful salespersons; time management; psychology of marketing; listing procedures; advertising; negotiation and closure of financing; and the Deceptive Trade Practices-Consumer Protection Act. Prerequisite or co-requisite: RELE 1201 or department chair approval. (3 :3-0)

RELE 1325 Real Estate Mathematics (270301)

(Formerly Real Estate 234, REAE 2314, REAL 2315)

This course of basic arithmetic skills focuses on mathematical logic, percentages, interest, time, value of money, depreciation, amortization, proration, and estimation of closing statements. (3:3-0)

RELE 2301 Law of Agency (521501)

(Formerly REAL 1302)

The study of the law of agency including principal-agent and master-servant relationships, the authority of an agent, the termination of an agent's authority, the fiduciary and other duties of an agent, employment law, deceptive trade practices, listing or buying representation procedures, and the disclosure of an agency. (3 :3-0)

RELE 2366 Practicum–Real Estate (521501)

This work-based instruction provides basic career exploration and/or helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. The emphasis is on practical work experience. Indirect supervision is provided by a work supervisor. A practicum may be a paid or unpaid learning experience. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. Prerequisite: Must have a job (paid or unpaid) working in a real estate related position at least 20 hours per week. (3:1-20)

RELE 2331 Real Estate Brokerage (521501)

A study of the law of agency, planning and organization, operational policies and procedures, recruiting, selection and training of personnel, records and control, and real estate firm analysis and expansion criteria. Prerequisite or co-requisite: RELE 1201 or department chair approval. (3:3-0)

RELE 2367 Practicum–Real Estate (521501)

(Formerly REAL 2375)

A basic or intermediate type of non-health professions work-based instruction that provides basic career exploration or helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. The emphasis is on practical work experience. Indirect supervision is provided by the work supervisor. A practicum may be a paid or unpaid learning experience. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. Prerequisite: Must have a job (paid or unpaid) working in a real estate related position at least 20 hours per week. (3:1-20)

Respiratory Care

HPRS 1106 Medical Terminology Essentials (510908)

(Formerly RSPT 1103)

This is a study of common medical terminology, emphasizing word origins, structure, and application. (1:1-0)

RSPT 1267 Respiratory Care Practicum I (510908)

(Formerly RESC 1222)

This course offers practical, general workplace training supported by an individualized learning plan developed by the employer, the College, and student. The course provides the student with the opportunity to learn about the hospital environment and the respiratory care department. Topics include basic cardiopulmonary resuscitation, basic patient care skills, patient assessment, gas and aerosol therapy, hyperinflation therapy, chest physiotherapy airway, care, and arterial blood gas sampling and analysis. Prerequisite: RSPT 1429. Co-requisite: RSPT 1431. (2:0-16)

RSPT 1325 Respiratory Care Sciences (510908)

(Formerly RTT 122, RETT 1212, RESC 1212, RESC 1312)

This is a study of cardiopulmonary sciences, including physics, math, chemistry, and statistics. (3:3-0)

RSPT 1340 Advanced Cardiopulmonary Anatomy and Physiology (510908)

(Formerly RTT132, RETT 1312, RESC 1312, RESC 1300)

This course provides an advanced study of the anatomy and physiology of the cardiovascular and pulmonary systems. (3:3-1)

RSPT 1429 Respiratory Care Fundamentals I (510908)

(Formerly RTT141, Respiratory Therapy Technology 131, RETT 1411, RESC 1411)

This course provides an introduction to the knowledge and skills required for respiratory care including history, medical terms/symbols, medical/legal, infection control, vital signs, physical assessment, chest x-ray interpretation, medical gas therapy, oxygen analyzers, and humidity/aerosol therapy. (4:3-3)

RSPT 1431 Respiratory Care Fundamentals II (510908)

(Formerly RTT 142, RTT 241, RETT 1412, RESC 1412)

This course provides a continuation of knowledge and skills for respiratory care including lung expansion therapy, bronchial hygiene therapy, artificial airways, manual resuscitation devices, suctioning, pulse oximetry, bedside spirometry, arterial sampling techniques and blood gas analysis and interpretation. Prerequisite: RSPT 1429. (4:3-3)

RSPT 2130 Respiratory Care Examination Preparation (510908)

(Formerly RSPT 2131)

This course IS a comprehensive review to optimize respiratory care credentialing exam success. (1:1-1)

RSPT 2167 Respiratory Care Practicum II (510908)

(Formerly RTT 211, RETT 2111, RESC 2211)

This course offers practical general workplace training supported by an individualized learning plan developed by the employer, the College, and student. This course is designed to provide increased exposure to management of the critically ill patient. It includes active participation in physician rounds and specialized monitoring. It also includes presentation of patient studies in a panel discussion format and practical aspects in the formulation of respiratory care plans. Prerequisite: RSPT 1267; co-requisite: RSPT 2314. (1:0-10)

RSPT 2258 Advanced Respiratory Care Patient Assessment (510908)

(Formerly RESC 2333)

This course covers integration of patient examination techniques, including patient history and physical exam, lab studies, x-ray, pulmonary function, arterial blood gases, and invasive and non-invasive hemodynamics. Prerequisite: RSPT 2355 (2:2-1)

RSPT 2266 Respiratory Care Practicum III (510908)

(Formerly RTT 212, RETT 2112, RESC 2212)

This course offers practical general workplace training supported by an individualized learning plan developed by the employer, the College, and student. This course provides the student with an opportunity to care for the critically ill pediatric and neonatal patient. It includes active participation in physician rounds and with special monitoring instrumentation and techniques of the pediatric and neonatal patient. Emphasis in this course is also placed on special problems in ventilation. It also includes presentation of patient studies with practical aspect in the formulation of a respiratory care plan. Prerequisite: RSPT 2167 and co-requisite: RSPT 2353. (2:0-16)

RSPT 2267 Respiratory Care Practicum IV (510908)

(Formerly RETT 2113, RESC 2213)

This course provides practical general workplace training supported by an individualized learning plan developed by the employer, the College, and student. The course provides the student with the opportunity to observe and study diagnostic testing of the pulmonary system. Through specialty rotations in the emergency room, emergency triage and care of the traumatically injured patient are demonstrated to the student. The student is presented the opportunity to refine skills in assessment and procedures via rotations through adult intensive care units. Instruction in the Advanced Cardiac Life Support (ACLS) program of the American Heart Association will be provided. Prerequisite: RSPT 2266 and co-requisite: RSPT 2258. (2:0-16)

RSPT 2310 Cardiopulmonary Disease (510908)

(Formerly RTT 134, RETT 1314, RESC 1314)

This course covers etiology, pathogenesis, pathology, diagnosis, history, prognosis, manifestations, treatment, and detection of cardiopulmonary diseases. Prerequisite: RSPT 1429. (3:3-0)

RSPT 2314 Mechanical Ventilation (510908)

(Formerly RESC 2215)

This course is a study of mechanical ventilation with emphasis on ventilator classification, methods, principles, and operational characteristics. Includes indications, complications, and physiologic effects/principles of mechanical ventilation. Emphasizes initiation, management, and weaning of ventilatory support. Prerequisite: RSPT 1431. (3:3-1)

RSPT 2317 Respiratory Care Pharmacology (510908)

(Formerly RSPT 1317)

This course is a study of drugs that affect the cardiopulmonary systems. Emphasis on classification, route of administration, dosages/ calculations, and physiological interactions. (3:3-0)

RSPT 2353 Neonatal/Pediatric Cardiopulmonary Care (510908)

(Formerly RETT 2322, RESC 2322, RESC 2422)

This is a study of acute care, monitoring, and management of the neonatal and pediatric patient. Prerequisite: RSPT 2314. (3:3-1)

RSPT 2355 Critical Care Monitoring (510908)

(Formerly RTT 231, RETT 2311, RESC 2311)

This course covers advanced monitoring techniques used to assess a patient in the critical care setting. (3:3-1)

Restaurant Management

(See Culinary Arts)

Sheet Metal

Sheet Metal Certificate Non-Credit Continuing Education Courses

MCHN 1001 Sheet Metal I

(Continuing Education Course)

This is an introduction to the materials, tools, and techniques used in the sheet metal industry. It reviews trade math problems involving measurement of lines, area, volume, weight, and geometric figures. It focuses on types and uses of hand, layout, and cutting tools along with bending and forming machines. Students practice using material of various type and properties as they apply the principles of layout and metal forming. (72 contact hours)

MCHN 1049 Sheet Metal II

(Continuing Education Course)

In this introduction to various types of pipe and fittings, emphasis is on principles and types of fittings for radial line development and on factors that influence bend allowances and calculations necessary for determining proper bend allowances. The course also focuses on principles of soldering roof flashings, gutters, down spouts, and sheet metal duct fabrications. (72 contact hours)

MCHN 1053 Sheet Metal III

(Continuing Education Course)

This is an introduction to the principles of airflow as applied to HVAC air distribution systems, components of HVAC, and the basic refrigeration cycle. The course introduces students to welding, brazing, and field measurements along with extensive triangulation layout, fabrication and fiberglass ductwork. (72 contact hours)

MCHN 1071 Sheet Metal IIB

(Continuing Education Course)

In this continuation of the study of various types of pipe and fittings, emphasis is on using blueprints and shop drawings to determine bend allowances and on calculations necessary for determining proper bend allowances in soldering roof flashings, gutters, down spouts, and sheet metal duct fabrications. (72 contact hours)

MCHN 1072 Sheet Metal IIIB

(Continuing Education Course)

This is a continuation to the study of triangulation layout and fabrication and fiberglass ductwork. It focuses on application of field measurements for layout and installation of duct sections and offsets. (72 hours)

MCHN 2030 Sheet Metal IV

(Continuing Education Course)

This course is a comprehensive review of developmental and fabrication techniques. It also provides an introduction to the concepts of shop production and organization, and to elements of air balance and specialty applications related to louvers, dampers, access doors, ventilators, and fume and exhaust systems. (72 contact hours)

MCHN 2071 Sheet Metal IVB

(Continuing Education Course)

This course offers extensive practice in the application of parallel line development, radial line development, and triangulation methods of fabrication used in the layout and fabrication of sheet metal air systems. (72 contact hours)

Course Descriptions

Sociology

SOCI 1301 Introduction to Sociology (4511015125)

(Formerly Sociology 234, SOCI 2314)

This study of the patterns of social behavior introduces the scope and objectives of sociology, as well as basic sociological concepts. Prerequisite: Reading level 6. (3:3-0)

SOCI 1306 Social Problems (4511015225)

(Formerly Sociology 235, SOCI 2315)

This is a study of the problems of social disorganization such as crime, delinquency, group prejudice, dependency, divorce, and world social difficulties. Prerequisites: Reading level 7 and Writing level 7. (3:3-0).

SOCI 2301 Intimate Relationships: Marriage and Family (4511015425)

(Formerly Sociology 237, SOCI 2317)

This is a study of issues and trends relating to courtship, mate-selection, and marital adjustment, together with a comprehensive study of the family as a social institution. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

SOCI 2306 Human Sexuality (4201015325)

This course covers the physical, psychological, and sociological facets of human sexuality. The course exposes students to the various scholarly research in this interdisciplinary field. Emphasis on self-awareness of one's own sexuality and adjustment, the interpersonal aspects of sexuality, and the social impact that sexual decisions and behavior have on society. This course is also listed as PSYC 2306; however, credit hours are limited to either Psychology or Sociology. Prerequisites: SOCI 1301 or PSYC 2301; Reading level 7 and Writing level 7. (3:3-0)

SOCI 2319 Multi-Cultural Studies (4511015325)

(Formerly Sociology 239)

This is a study of the principal minority groups in American society and other selected cultures: their history, sociological significance, problems of inter-group relations, social movement, and related contemporary problems with particular emphasis on the ethnic components of Texas society. Prerequisites: Reading level 7 and Writing level 7. (3:3-0)

SOCI 2336 Criminology (4504015125)

(Formerly Sociology 2316, SOCI 2316)

This is an examination of current trends in the nature and causes of crime, indexes of crime, perspectives and methods in criminology, psychopathy and crime, culture areas and crime, processes in criminal behavior, and sociological aspects of criminal law and procedure. Prerequisites: SOCI 1301 or approval of division chair, Reading level 7 and Writing level 7. (3:3-0)

Speech

SPCH 1145 Forensic Activities (2310016012)

(Formerly Speech 111, 112, 211, 212, SPCH 1111)

This course includes intensive preparation for intercollegiate competition in debate and/or speech events. The course may be taken a maximum of four times for credit. Prerequisite: Reading level 7. (1:0-3)

SPCH 1315 Public Speaking (2310015312)

(Formerly Speech 131, SPCH 1311)

This introduction to public speaking offers training in principles of speech composition and delivery and an introduction to various types of speaking situations. Prerequisite: Reading level 6. (3:3-0)

SPCH 1318 Interpersonal Communications (2310015412)

(Formerly Speech 132, SPCH 1312)

This is a course in the theory and practice of person-to-person interaction, including study of listening, verbal communication, and non-verbal communication. Prerequisite: Reading level 6. (3:3-0)

SPCH 1321 Business and Professional Speech (2310015212)

(Formerly Speech 134, SPCH 1314)

This course develops the student's ability to communicate effectively in situations that arise in business and professional life. Topics include communication theory; the research, organization and presentation of business speeches; small group discussion; and interviewing. Prerequisite: Reading level 6. (3:3-0)

SPCH 1342 Voice and Diction (2310015812)

(Formerly Speech/Drama 232, SPCH 2312)

This course covers effective habits in the use of the speaking voice, emphasizes the study of English phonetics, phrasing, intonation, and voice production. Training also enables the student to listen intelligently to the sound of his/her own voice. Students cannot receive credit for both SPCH 1342 and DRAM 2336. Prerequisite: Reading level 6. (3:3-0)

SPCH 2333 Discussion and Small Group Communication (2310015612)

(Formerly Speech 235, SPCH 2315)

This course focuses on discussion and small group theories and techniques as they relate to group processes and interaction. Prerequisite: Reading level 7. (3:3-0)

SPCH 2335 Argumentation and Debate (2310015912)

(Formerly Speech 233, SPCH 2313)

This course offers instruction in the principles of argumentation and debate; analysis and discussion of current public questions by briefing, strategy and refutation. Students will not receive credit for both SPCH 2335 and SPCH 2336. Prerequisite: Reading level 7. (3:3-0)

SPCH 2336 Forensics (2310016012)

(Formerly Speech 234, SPCH 2314)

This course is open to students and focuses on oral interpretation and forensics as related to competition and public performance. Students will not receive credit for both SPCH 2335 and SPCH 2336. Prerequisite: Reading level 7. (3:3-0)

SPCH 2341 Oral Interpretation (2310015712)

(Formerly Speech/Drama 231, SPCH 2311)

This introduction to oral interpretation of literature focuses on preparation and reading of printed material. Students gain practical experience in storytelling and choral speaking. They receive instruction in techniques and analysis of literature to be read aloud. Students cannot receive credit for both SPCH 2341 and DRAM 2341. Prerequisite: Reading level 6. (3:3-0)

Study Skills

(See Developmental Studies)

Surgical Technology

HPRS 2200 Pharmacology for Health Professions (519999)

This is a study of drug classifications, actions, therapeutic uses, adverse effects, methods of administration, client education, and calculation and dosages. Prerequisites: Reading level 7, and Writing level 6. (2:2-0)

HPRS 2301 Pathophysiology (519999)

Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and physical and psychological reactions to diseases and injuries. Prerequisites: SRGT 1201, SRGT 1471, SRGT 1505, SRGT 1509, SRGT 1260. Corequisites: HPRS 2200, SRGT 1441, SRGT 1360. (3:3-0)

SRGT 1201 Medical Terminology (510909)

This is a study of the basic structure of medical terms including prefixes, suffixes, roots, combining forms, plurals, pronunciation, spelling, and definitions of medical terms. Emphasis on building a vocabulary required for practice within allied health care professions. Prerequisites: Reading level 7, Writing level 6. (2:2-0)

SRGT 1260 Clinical 1 Surgical (510909)

(Formerly SURT 1201)

This introductory level course provides detailed education, training and work-based experience with direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each student by the faculty. On-site clinical instruction, supervision, evaluation and placement are the responsibility of the College faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Introductory level. Prerequisites: SRGT 1201, Reading level 7 and Writing level 6. Co-requisite: SRGT 1505, SRGT 1409, SRGT 1471 (2:0-8)

SRGT 1261 Clinical 3 Surgical (510909)

(Formerly SURT 1203)

This advanced clinical provides detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each student by the faculty. On-site clinical instruction, supervision, evaluation and placement are the responsibility of the College faculty. Clinical experiences

are unpaid external learning experiences.

Course may be repeated if topics and learning outcomes vary. Advanced level. Prerequisite: HPRS 2200, HPRS 2301, SRGT 1201, SRGT 1260, SRGT 1360, SRGT 1505, SRGT 1509, SRGT 1441, SRGT 1471, Reading level 7, and Writing level 6. (2:0-12)

SRGT 1360 Clinical 2 Surgical (510909)

(Formerly SURT 1302)

This intermediate course provides detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each student by the faculty. On-site clinical instruction, supervision, evaluation and placement are the responsibility of the College faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary. Intermediate level. Prerequisites: SRGT 1201, SRGT 1260, SRGT 1505, SRGT 1509, SRGT 1471, Reading level 7 and Writing level 6. (3:0-14)

SRGT 1441 Surgical Procedures I (510909)

(Not offered after Summer 2009)

In this introduction to surgical pathology and its relationship to surgical procedures, emphasis is on surgical procedures related to the general, OB/GYN, genitourinary, and orthopedic surgical specialties, incorporating instruments, equipment, and supplies required for safe patient care. Prerequisite: SRGT 1201, SRGT 1260, SRGT 1505, SRGT 1509, SRGT 1471, Reading level 7, and Writing level 6. (4:4-0)

SRGT 1442 Surgical Procedures II (510909)

(Not offered after Summer 2009)

This course is an introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the thoracic, peripheral vascular, plastic/reconstructive, EENT, cardiac, and neurological surgical specialties incorporating study of instruments, equipment, and supplies required for safe patient care. Prerequisites: HPRS 2200, HPRS 2301, SRGT 1201, SRGT 1260, SRGT 1360, SRGT 1505, SRGT 1509, SRGT 1441, SRGT 1471, Reading level 7, and Writing level 6. (4:4-0)

SRGT 1471 Anatomy and Physiology for Surgical Technology (510909)

This course will introduce a foundation for anatomy and physiology which focuses on relations to surgical intervention and perioperative care. Prerequisite: SRGT 1201 or department chair approval (NOTE: Credit will not be given for VNSG 1420 and SRGT 1471). (4:4-0)

SRGT 1505 Introduction to Surgical Technology (510909)

This course provides orientation to surgical technology theory, surgical pharmacology and anesthesia, patient care concepts, electricity, basic computer skills, and technological sciences as related to surgical technologists. Prerequisite: SRGT 1201 and Reading level 7, Writing level 6. (5:5-1)

SRGT 1509 Fundamentals of Perioperative Concepts and Techniques (510909)

In-depth coverage of perioperative concepts such as aseptic principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field. Prerequisites: SRGT 1201, Reading level 7, and Writing level 6. Co-requisites: SRGT 1505, SRGT 1260 and SRGT 1471. (5:4-3)

SRGT 1541 Surgical Procedures I (510909)

(Formerly SRGT 1441)

This course is an introduction to surgical procedures and related pathologies. Emphasis on surgical procedures related to general, obstetrics/gynecology, genitourinary, otorhinolaryngology and orthopedic surgical specialties incorporating instruments, equipment, and supplies required for perioperative patient care. Prerequisites: SRGT 1201, SRGT 1505, SRGT 1509, SRGT 1260, SRGT 1471. Corequisites: HPRS 2301, HPRS 2200, SRGT 1360. (5:5-0)

SRGT 1542 Surgical Procedures II (510909)

(Formerly SRGT 1442)

This is an introduction to surgical procedures and related pathologies. Emphasis on surgical procedures related to thoracic, peripheral vascular, plastic/reconstructive, ophthalmology, cardiac, and neurological surgical specialties incorporating instruments, equipment, and supplies required for perioperative patient care. Prerequisites: SRGT 1201, SRGT 1505, SRGT 1509, SRGT 1260, SRGT 1471, HPRS 2200, HPRS 2301, SRGT 1541, SRGT 1360. Corequisites: SRGT 1261, SRGT 2130. (5:5-0)

SRGT 2130 Professional Readiness (510909)

This course is a transition into the professional role of the surgical technologist. Includes professional readiness for employment, attaining certification, and maintaining certification status. Prerequisite: SRGT 1201, SRGT 1471, SRGT 1505, SRGT 1509, SRGT 1260, HPRS 2200, HPRS 2301. Corequisites: SRGT 1261, SRGT 1542. (1:1-0)

Course Descriptions

SRGT 2371 Special Cases/Needs (510909)

(Not offered after Summer 2009)

This course provides specific techniques and safety measures of laser technology in the operating room, focusing on concepts of tissue interaction and problem solving. Techniques for analyzing surgical intervention needed for the trauma, pediatric, and the oncology patient will be addressed. Prerequisites: HPRS 2200, HPRS 2301, SRGT 1201, SRGT 1260, SRGT 1360, SRGT 1505 SRGT 1509, SRGT 1441, SRGT 1471, Reading level 7, and Writing level 6. (3:3-0)

Truck Driving (Commercial)

CVOP 1013 Commercial Vehicle Operator I (490205)

CVOP 1013 is the first of two 126-clock hour courses in Commercial Truck Driving. This course is designed to familiarize students with the basic operations of a tractor-trailer combination. It consists of thirty (30) hours of classroom lecture and demonstration, and ninety (90) hours of actual hands-on tractor-trailer operation. Co-requisite: CVOP 1040.

CVOP 1040 Commercial Vehicle Operator II (490205)

CVOP 1040 is the second and final 120-clock hour course in Commercial Truck Driving. This course is designed to provide classroom instruction in loading and unloading, plus hands-on practice in routine equipment maintenance and in making driver's daily log book entries. Several long-haul trips are taken, and the Department of Transportation (DOT) written and driving exams are administered. Co-requisite: CVOP 1013.

Vision Care Technology

HPRS 1101 Introduction to Health Professions (510000)

This is an overview of roles of various members of the health care system, educational requirements, and issues affecting the delivery of health care. (1:1-0)

HPRS 1105 Medical Law/Ethics for Health Professionals (510000)

This introduction to the relationship between legal aspects and ethics in health care, with emphasis on responsibilities of health care professionals. (1:1-0)

OPTS 1166 Ophthalmic Practicum I (511801)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. The course may be repeated if topics and learning outcomes vary. (1:0-8)

OPTS 1311 Visual System (511802)

This is an overview of the ophthalmic field, including the anatomy and physiology of the eye, related structures, and the visual system. (3:3-0)

OPTS 1191 Special Topics in Opticianry/Dispensing Optician (511801)

Topics address recently identified current events, skills, knowledge, and/or attitude and behavior pertinent to the technology or occupation and relevant to the professional development of the students. This is an introductory course for first year students. (1:1-0)

OPTS 1315 Basic Contact Lenses (511802)

In this introduction to contact lens theory and practice, topics include the history, development, and manufacturer of contact lenses; lens materials, designs, fitting, and care techniques; and skills necessary for the accurate measurement of lens parameters. (3:2-3)

OPTS 1319 Vision Care Office Procedures (511802)

This is an overview of procedures used in an optical, optometric, or ophthalmological office. Instruction focuses on government, third party, and other managed care insurance claim forms, maintenance of patient records, safety regulations, correspondences, and ethics. (3:3-0)

OPTS 1391 Special Topics in Opticianry/Dispensing Optician (511801)

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the students. This course is designed for the second year student. (3:3-0).

OPTS 1501 Ophthalmic Dispensing (511801)

This is an introduction to the basic principles of frame selection, styling, refractive errors, and lens design, and to the use of tools and instruments used to measure and make adjustments necessary to properly dispense spectacles. (5:3-6)

OPTS 2266 Ophthalmic Practicum II (511801)

This course offers practical general training and experiences in the workplace. The College, with the employer, develops and documents an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. The guided external experiences may be paid or unpaid. The course may be repeated if topics and learning outcomes vary. (2:0-16)

OPTS 2335 Advanced Contact Lenses (511802)

(Not offered after Fall 2007)

This course focuses on knowledge and skills necessary to assist a medical practitioner in the dispensing, evaluation, and care of soft, rigid, toric, multi-focal, therapeutic, and other specialty contact lenses. (3:2-3)

OPTS 2350 Ophthalmic Surgical Techniques (511802)

This continuation of the study of ophthalmic techniques introduces the student to aseptic and non-aseptic sterilization techniques used in the surgical field and provides knowledge and practice in scrubbing techniques used when assisting during ophthalmic surgical procedures. (3:3-2)

OPTS 2431 Advanced Ophthalmic Dispensing (511801)

In this advanced study of the procedures necessary to dispense, topics include lens aberrations, magnification, tilt, reflection, absorption and transmission, advanced lens materials, high-powered prescription considerations, and partial vision. (4:2-6)

OPTS 2441 Ophthalmic Techniques (511802)

In this presentation of information and practical training in the techniques necessary to properly assist the refractionist or eye physician, topics include visual acuity assessments and performance of various diagnostic tests. (4:2-6)

OPTS 2445 Advanced Ophthalmic Techniques (511802)

This continuation of the study of ophthalmic techniques introduces students to the principles and techniques of various diagnostic evaluations. Topics include refractometry and retinoscopy, ophthalmic photography, application tonometry, and advanced clinical assessments. An overview of standardized tools prevalent in the field will be covered. (4:2-6)

Visual Communication

(Formerly Commercial Art; see Art and Visual Communication for course descriptions)

Welding Technology

Credit Courses

WLDG 1528 Introduction to Shielded Metal Arc Welding (SMAW) (480508)

(Formerly WELD 1511)

This introduction to the shielded metal arc welding process, emphasizes power sources, electrode selection, oxy-fuel cutting, and various joint designs. It also focuses on SMAW fillet welds in various positions. (5:3-5)

WLDG 1530 Introduction to Gas Metal Arc Welding (GMAW) (480508)

(Formerly WELD 1519)

This is a study of the principles of gas metal arc welding, setup and use of GMAW equipment, and safe use of tools and equipment. Instruction in various joint designs. (5:3-5)

WLDG 1534 Introduction to Gas Tungsten Arc (GTAW) Welding (480508)

This is an introduction to the principles of gas tungsten arc welding (GTAW), set-up/use of GTAW equipment, and safe use of tools and equipment. It includes instruction in various positions on joint designs. (5:3-5)

WLDG 1535 Introduction to Pipe Welding (480508)

(Formerly WELD 2511)

This is an introduction to welding of pipe using the shielded metal arc welding process. It focuses on electrode selection, equipment set-up, and safe shop practices. It also emphasizes weld positions 1G and 2G, using various electrodes. Prerequisite: WLDG 2543 or department chair approval. (5:3-5)

WLDG 2409 Welding Codes (480508)

(Formerly WELD 1503)

This is an in-depth study of welding codes and their development in accordance with structural standards, welding processes, and destructive and nondestructive test methods. (4:4-0)

WLDG 2543 Advanced Shielded Metal Arc Welding (SMAW) (480508)

(Formerly WELD 1512)

This course explores advanced topics based on accepted welding codes and provides training with various electrodes in shielded metal arc welding with open V-groove joints in all positions. Prerequisite: WLDG 1528 or approval of department chair. (5:3-5)

WLDG 2551 Advanced Gas Tungsten Arc Welding (GTAW) (480508)

(Formerly WELD 2512)

This course focuses on advanced topics in GTAW welding, including welding in various positions and directions. Prerequisite: WLDG 1534 or department chair approval. (5:3-5)

WLDG 2553 Advanced Pipe Welding (480508)

This course focuses on advanced topics involving welding of pipe using the shielded metal arc welding process. Topics include electrode selection, equipment set-up, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes. Prerequisite: WLDG 1535 or department chair approval. (5:3-5)

WLDG 2571 Advanced Gas Tungsten Arc (GTAW) Welding Stainless Steel (480508)

(Formerly WELD 2523)

This is an in-depth study of welding stainless steel. Instruction focuses on SMAW and GTAW welding various positioned groove welds. Prerequisite: WLDG 2551 or department chair approval. (5:3-5)

WLDG 2580 Cooperative Education Welding (480508)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. Includes lecture component. Prerequisites: WLDG 1528 and WLDG 2543 for Structural Welder Occupational Certificate; WLDG 1530, 1534, 2551 for Gas Shielded

Certificate of Technology. For A.A.S. Degree a minimum of 20 semester hours of A.A.S. welding courses are required. An accumulative GPA of at least 2.0 is required. An interview and department chair approval are required 60 days prior to enrollment. (5:1-28)

Non-Credit Continuing Education Courses Welding Certificate

WLDG 1028 Introduction to Shielded Metal Arc Welding (SMAW) (480508)

This introduction to shielded metal arc welding process emphasizes power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction also covers SMAW fillet welds in various positions. (128 contact hours)

WLDG 1034 Introduction to Gas Tungsten Arc (GTAW) Welding (480508)

This is an introduction to the principles of gas tungsten arc welding (GTAW), setup/use of GTAW equipment, and safe use of tools and equipment. Welding instruction covers various positions on joint design. (128 contact hours)

WLDG 1035 Introduction to Pipe Welding (480508)

This introduction to welding of pipe using the shielded metal arc welding process, includes electrode selection, equipment set-up, and safe shop practices. Emphasis on weld positions 1G and 2G, using various electrodes. (128 contact hours)

WLDG 2043 Advanced Shielded Metal Arc Welding (SMAW) (480508)

Training is provided with various electrodes in shielded metal arc welding processes with open V-groove joint positions based on accepted welding codes. (128 contact hours)

WLDG 2051 Advanced Gas Tungsten Arc Welding (GTAW) (480508)

This course focuses on advanced topics in GTAW welding, including welding in various positions and directions. (128 contact hours)

WLDG 2053 Advanced Pipe Welding (480508)

This course focuses on advanced topics involving welding of pipe using the shielded metal arc welding process. Topics include electrode selection, equipment set-up, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes. (128 contact hours)