ACCT Accounting

ACCT 2301 Principles of Financial Accounting 3-0-3
An introduction to accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset, liability, and equity accounting in proprietorships, partnerships, and corporations.

ACCT 2302 Principles of Managerial Accounting 3-0-3
Accounting concepts and their application in transaction analysis and financial statement preparation; analysis of financial statements; and asset and equity accounting in proprietorships, partnerships, and corporations. Introduction to cost behavior, budgeting, responsibility accounting, cost control, and product costing. Prerequisite: ACCT 2301.

AGAH Agriculture see also AGCR, AGEQ, AGMG and HALT

AGAH 1343 Animal Health 2-4-3
An overview of anatomy and physiology as it relates to animal health. Topics include disease symptoms, basic immunology, diagnosis, prevention, and control of infectious and non-infectious diseases of animals.

AGAH 1347 Animal Reproduction 2-4-3
Study of organs, functions, endocrinology, and common management practices related to reproduction. Other topics will include artificial insemination and pregnancy determination.

AGAH 1353 Beef Cattle Production 2-4-3
An overview of the beef cattle industry. Topics include the organization and operation of beef cattle enterprises, selection breeding, reproduction, health, nutrition, management, and marketing. Suggested prerequisite: AGRI 1419.

AGAH 2313 Principles of Feeds and Feeding 2-4-3
An overview of the anatomy and physiology of the digestive systems of various livestock animals. Study of the role and application of feed nutrients and additives. Topics include comparative aspects of digestion, absorption, and metabolism of nutrients. Emphasis on identification of nutrient requirements and formulation of dietary feeding regimens.

AGCR Agriculture see also AGAH, AGEQ, AGMG and HALT

AGCR 1307 Range Management 2-4-3
Study of the practical problems of managing native pastures and range lands. Topics include range land ecology, stocking rates, rotation systems, toxic plants, range reseeding, brush control, and ecological and physiological responses of range vegetation to grazing.

AGCR 2318 Soil Science 2-4-3
Introduction to the physical, chemical, and biological properties of soils. Topics include the relationship between crops and soils, conservation of soil and water resources, and the economic use of fertilizer.

AGEQ Agriculture see also AGAH, AGCR, AGMG and HALT

AGEQ 1301 Equine Behavior and Training I 2-3-3
Instruction in basic equine behavior and training methods. Topics include anatomy and physiology, behavior, safety, health care management, and training methods.

AGEQ 1311 Equine Science I 2-3-3
An introduction to the horse industry. Topics include breeds and breeding, selection, and management practices.

AGEQ 1319 Western Horsemanship I 2-3-3
Instruction in basic horsemanship skills including handling, saddling, bridling, mounting, riding, grooming, safety, and basic health care.

AGEQ 2301 Equine Behavior and Training II 2-3-3
A study of advanced concepts in equine behavioral patterns relevant to specific performance training strategies. Emphasis on training methods for specific performance objectives.

AGEQ 2311 Equine Science II 2-3-3
Study of advanced concepts in horse production. Emphasis on management practices utilized in the horse industry.

AGEQ 2339 Western Horsemanship II 2-3-3
Instruction in advanced horsemanship skills including cues, lead changes, head-set, side-pass, and pivots.

AGMG Agriculture see also AGAH, AGCR, AGEQ, and HALT

AGMG 2306 Livestock and Meat Marketing 2-4-3
Exploration of the relationship of livestock production to marketing. Topics include trends, consumption, processing, distribution, governmental regulation, transportation, and animal health.

AGMG 2486 Internship Agriculture Business & Management, General 0-19-4
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. Department approval required.

AGRI Agriculture

AGRI 1131 The Agriculture Industry 1-0-1
An overview of world agriculture, nature of the industry, resource conservation, and the American system, including production, distribution, and marketing.

AGRI 1309 Computers in Agriculture 2-2-3
This course covers the use of computers in agricultural applications. It includes an introduction to programming languages, word processing, electronic spreadsheets, and agriculture software.

AGRI 1407 Agronomy 3-3-4
Classification and distribution of farm crops, their use, production, and identification will be studied with emphasis placed on those crops important to Texas. Studies will also include crop improvement technology, value of rotation, weed/pest/disease management, and use/need of fertilizer, which will be determined by soil testing in the laboratory to the course. Laboratory work will also include practical use of tillage and harvesting equipment by student participation in actual crop production.

AGRI 1415 Horticulture 3-3-4
An introduction to horticulture. Lectures will include basic botany, plant classification, plant structures, plant growth processes, plant production, as well as the environmental effects on the plant. Discussions will also include various landscape and ornamental plants, especially those that are native or well adapted to the local area. Laboratory will include hands on experience in all aspects of plant propagation and an introduction to greenhouse production and management.

AGRI 1419 Introductory Animal Science (Animal Husbandry) 3-3-4
An introductory survey course. Farm animals as a source of food, clothing, and labor. The place of livestock in farming and ranching. The value of heredity and breeding for improvement, importance of judging, pedigrees, and proper nutrition, and the proper handling and management of livestock.

AGRI 2301 Agriculture Power Units 2-2-3
Fundamentals of internal combustion engines: gasoline, diesel, and liquefied petroleum. Maintenance and adjustments of the electrical, ignition, fuel, lubricating, and cooling systems.

AGRI 2317 Introduction to Agriculture Economics 3-0-3
Fundamental economic principles including assembly, food production and processing, distribution, and agribusiness industries and their application to the problems of the agriculture industry.

AGRI 2330 Wildlife Conservation and Management 2-2-3
This course covers the principles and practices used in the production improvement of wildlife resources and the aesthetic, ecological, and recreational uses of public and private lands.

AIRP Aviation Science see also AVIM

AIRP 1255 Intermediate Flight 1-3-2
Provides students with flight hours and skills to fulfill solo cross country requirements for the F.A.A., Commercial Pilot Certificate with airplane single engine land rating. Dual flight instruction provided to introduce basic instrument operations including instrument approaches and holding procedures. Prerequisites: F.A.A. Private Pilot Certificate with Airplane Category Rating; Current Class II F.A.A. Medical Certificate and completion or concurrent enrollment in AIRP 1341.

AIRP 1305 Aircraft Science 3-0-3
Introductory course in the development of aviation. Topics include design and development of aircraft and aircraft components, basic flight systems, aircraft flight characteristics and performance and the historical development of the Aviation Industry.

AIRP 1307 Aviation Meteorology 3-0-3
In-depth study of meteorological phenomena affecting aircraft operations. Topics include basic concepts of aviation meteorology including temperature, moisture, pressure and stability. Major emphasis is placed on recognition and avoidance of common aviation weather hazards. Course also covers procurement, analysis and use of weather reports and forecasts for flight planning.

AIRP 1315 Private Flight 2-3-3
Flight training to prepare the student for the completion of F.A.A. certification requirements for the Private Pilot Certificate with Airplane Single Engine Land Rating. Dual and solo flight hours are included for training in the areas of private pilot flight maneuvers and cross country navigation. Prerequisite: F.A.A. Class II Medical Certificate, F.A.A. Student Pilot Certificate and completion or concurrent enrollment in AIRP 1417.

AIRP 1341 Advanced Air Navigation 3-0-3
Skill development in advanced airplane systems and performance including radio navigation and cross-country flight planning. Includes an introduction to instrument flight operations and navigation. This course may be used as part of a program leading to Federal Aviation Administration certification. Prerequisite: AIRP 1417.

AIRP 1343 Aerodynamics 3-0-3
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.

AIRP 1417 Private Pilot Ground School 3-3-4
Basic ground school for the Private Pilot Certificate, providing the student with the necessary aeronautical knowledge that can be used for FAA Private Pilot Certification. Topics include principles of flight, radio procedures, weather, navigation, aerodynamics, and Federal Aviation Administration regulations.

AIRP 1451 Instrument Ground School 3-3-4
A study of basic instrument radio and navigation fundamentals used in instrument flight. Topics include a description and practical use of aerial navigation systems and instruments, charts used for instrument flight, and Federal Aviation Administration regulations. Qualifies as part of a program leading to Federal Aviation Administration certification. Prerequisite: AIRP 1341.

AIRP 2239 Commercial Flight 1-3-2
Flight instruction necessary to qualify for the Federal Aviation Administration Commercial Pilot Certificate. Instruction includes both dual and solo flight training to prepare the student for mastery of all commercial pilot maneuvers. Prerequisite: Minimum of a Private Pilot Certificate with Airplane category and instrument rating; have at least 125 hours of flight time of which no more than 40 were in an approved ground trainer; hold a current Class II FAA Medical Certificate; have completed or be concurrently enrolled in AIRP 2337, Commercial Ground School. Approved ground school must be completed prior to finishing AIRP 2239.

AIRP 2243 Flight Instructor -Multiengine Airplane 1-2-2
Instruction in flight training to prepare the student for the Federal Aviation Administration Flight Instructor - Multiengine Airplane Rating. Includes combined ground and flight instruction and analysis of flight maneuvers. Prerequisite: Must hold a current FAA CFI Certificate with Airplane Single Engine Rating and Instrument Airplane.

AIRP 2250 Instrument Flight 1-3-2
Preparation for completion of the Federal Aviation Administration Instrument Pilot Rating with mastery of all instrument procedures. Prerequisite: Minimum of a Private Pilot Certificate with an Airplane category; hold a Class II FAA Medical Certificate; a minimum of 95 hours of flight experience of which 25 were solo cross-country since the Private Pilot Certificate was issued; 20 hours of instrument instruction of which no more than 10 were in an approved ground trainer; have completed or will complete AIRP 1451 before the end of this course.

AIRP 2251 Multiengine Flight 2-2-2
Preparation for the multiengine class rating which will be added to a current pilot certificate. Includes explanation and demonstration of all required Federal Aviation Administration normal and emergency operations and procedures. Prerequisite: Commercial Pilot Certificate.

AIRP 2336 Certified Flight Instructor - Airplane 2-3-3
Flight instruction necessary to qualify for the Federal Aviation Administration Certified Flight Instructor - Airplane Certificate. Topics include ground and flight instruction. Prerequisite: Must hold Commercial Pilot certification with instrument rating.

AIRP 2337 Commercial Ground School 3-0-3
A study of advanced aviation topics that can be used for Federal Aviation Administration certification at the commercial pilot level. Includes preparation for the Commercial Airplane knowledge test. Prerequisite: AIRP 1451.

AIRP 2342 Flight Instructor - Instrument Airplane 2-2-3
Skill development for flight instructors necessary to qualify for the Federal Aviation Administration Certified Flight Instructor Instrument Rating, Airplane Single-Engine Land. Prerequisite: Certified Flight Instructor Certificate, with Single Engine Rating.

AIRP 2355 Propulsion Systems 3-0-3
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.

ANTH Anthropology

ANTH 2301 Physical Anthropology 3-0-3
Principles of physical anthropology, human evolution, race, heredity, the organic basis of culture, and cultural history through the Paleolithic stage.

ANTH 2302 Introduction to Archeology 3-0-3
Overview of human origins and biocultural adaptations. Introduces methods and theory in the excavation and interpretation of material remains of past cultures.

ANTH 2346 General Anthropology 3-0-3
Study of human beings, their antecedents and related primates, and their cultural behavior and institutions. Introduces the major sub-fields: physical and cultural anthropology, archeology, linguistics, and ethnology.

ANTH 2351 Cultural Anthropology 3-0-3
Key concepts, methods and theory in the study of cultural diversity, social institutions, linguistics, and culture change among world peoples.

ARAB Arabic

ARAB 1311 Beginning Arabic I 3-0-3
Fundamental skills in listening, comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

ARAB 1312 Beginning Arabic II 3-0-3
Fundamental skills in listening, comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Prerequisite: ARAB 1311 with a grade of "C" or above.

ARAB 1411 Beginning Arabic I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

ARAB 1412 Beginning Arabic II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: ARAB 1411 with a grade of "C" or above.

ARAB 2311 Intermediate Arabic I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisites: ARAB 1411 and ARAB 1412 with a grade of "C" or above.

ARAB 2312 Intermediate Arabic II 3-0-3
This course continues reading, drill on syntax as needed for reading, composition, and conversation. Prerequisite: ARAB 2311 with a grade of "C" or above.

ARCE Computer Aided Drafting and Design see also DFTG

ARCE 1452 Structural Drafting 3-3-4
A study of structural systems including concrete foundations and frames, wood framing and trusses, and structural steel framing systems. Includes detailing of concrete, wood, and steel to meet industry standards including the American Institute of Steel Construction and The American Concrete Institute. Prerequisite: Sophomore standing in the drafting program.

ARTC Graphics and Printing see also GRPH

ARTC 1302 Digital Imaging I 2-4-3
Digital imaging using raster image editing and/or image creation software; scanning, resolution, file formats, output devices, color systems, and image-acquisitions. Prerequisite: GRPH 1405.

ARTC 1313 Digital Publishing I 2-4-3
The fundamentals of using digital layout as a primary publishing tool and the basic concepts and terminology associated with typography and page layout. Prerequisite: GRPH 1405.

ARTC 1327 Typography 2-4-3
A study of letterforms and typographic concepts as elements of graphic communication. Emphasis on developing a current, practical typographic knowledge based on industry standards. Prerequisite: ARTC 2348.

ARTC 2305 Digital Imaging II 2-4-3
Principles of digital image processing and electronic painting. Emphasis on bitmapped- or raster-based image marking and the creative aspects of electronic illustration for commercial or fine art applications. Prerequisite: ARTC 1302.

ARTC 2313 Digital Publishing II 2-4-3
Layout procedures from thumbnails and roughs to final comprehensive and print output. Emphasis on design principles for the creation of advertising and publishing materials, and techniques for efficient planning and documenting projects. Prerequisite: ARTC 1313.

ARTC 2333 Publication Design 2-4-3
Development of skills and advanced knowledge of publishing software, with emphasis on the maintenance of visual continuity in documents for publication. Prerequisite: ARTC 1327.

ARTC 2348 Digital Publishing III 2-4-3
A project based page layout course from concept to completion addressing design problems, preflight of files, color separations, and trapping techniques. Prerequisite: ARTC 2313.

ARTC 2435 Portfolio Development for Graphic Design 3-3-4
Preparation of a portfolio comprised of completed graphic design projects. An evaluation and demonstration of the portfolio presentation methods based on the student's specific area of study. Prerequisite: GRPH 1419.

ARTC 2488 Internship – Commercial and Advertising Art 0-19-4
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. Prerequisite: GRPH 1419. Department approval required.

ARTS Arts

ARTS 1303 Art History I 3-0-3
This course is a survey of the major and minor arts from prehistoric times to the 14th century. Prerequisite: None

ARTS 1304 Art History II 3-0-3
This course is a survey of the major and minor arts from the 14th century to the present. Prerequisite: None.

ARTS 1311 Design I 2-4-3
This course gives basic instruction in the elements and principles of design, with emphasis on the study of form and color theory. It is a study of design in two-dimensional formats. Prerequisite: None

ARTS 1312 Design II 2-4-3
This course gives basic instruction in the principles and elements of design as applicable to three-dimensional design problems. Prerequisite: None.

ARTS 1316 Drawing I 2-4-3
This course involves a study of the basic drawing skills including both abstraction and expressive drawing in charcoal, pencil, pen, wash, conte, and mixed media. Prerequisite: None

ARTS 1317 Drawing II 2-4-3
This course continues the development of skills, application of drawing media, and personal expression explored in Drawing I. Prerequisite: ARTS 1316.

ARTS 2311 Design III 2-4-3
This course is designed primarily for the Commercial Art major, but can apply to Fine Arts as well. The student will learn to use standard computer-aided techniques in creating and elaborating upon designs. Focus will be on the use of Adobe Photoshop and Illustrator. Prerequisite: Computer literacy and ARTS 1311, or Instructor Approval.

ARTS 2313 Design Communications I 2-4-3
This course is a study of current concerns and practices in the commercial arts, including contemporary media and techniques. Emphasis is on the introduction of Adobe Photoshop. Students must be computer literate. Prerequisite: None

ARTS 2314 Design Communications II 2-4-3
This course is a study of current concerns and practices in the commercial arts, including contemporary media and techniques. Emphasis is on the use of Adobe Photoshop for the restoration and repair of images as well as correction and enhancement of digital photographs. Students must be computer literate. Prerequisite: None

ARTS 2316 Painting I 2-4-3
This course studies the techniques and materials used in oil-based and emulsion based painting. Drawing skills are recommended. Prerequisite: None.

ARTS 2317 Painting II 2-4-3
This course is a continuation of techniques explored in ARTS 2316 with emphasis on individual expression. Prerequisite: ARTS 2316.

ARTS 2323 Life Drawing I 2-4-3
This is a life drawing course which emphasizes structure and action of the human figure. Prerequisite: None.

ARTS 2341 Art Metals I 2-4-3
An introduction to jewelry-making and metalworking techniques. Basic fabrication techniques are stressed including bezel settings. Some lost wax casting is included. Prerequisite: None

ARTS 2342 Art Metals II 2-4-3
A continuation of jewelry-making and metalworking techniques. Lost wax casting, surface treatments, and 3-D construction are emphasized.
Prerequisite: ARTS 2341.

ARTS 2346 Ceramics I 2-4-3
This course is an introduction to making pottery by hand-built methods. Glazing and decoration techniques are covered. Prerequisite: None

ARTS 2347 Ceramics II 2-4-3
This course is a continuation of pottery-making techniques. Prerequisite: ARTS 2346.

ARTS 2356 Photography I 2-4-3
An introduction to the basics of photography. Technical information will include camera operation, black and white camera techniques, knowledge of chemistry, and presentation skills. Emphasis will also be placed on design, history, and contemporary trends as a means of developing an understanding of photographic aesthetics. Students will be asked to complete projects which address art, journalism, and commercial photography. Prerequisite: None

ARTS 2357 Photography II 2-4-3
Extends the student's knowledge of technique including digital photography and guides them in developing a personal outlook towards a specific application of the photographic process.

ARTS 2366 Watercolor I 2-4-3
This course covers various techniques of painting in watercolor. It stresses color and composition in application of the medium. Drawing skills are recommended. Prerequisite: None.

AUMT Automotive Service and Repair

AUMT 1405 Introduction to Automotive Technology 3-3-4
An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, professional responsibilities, and basic automotive maintenance.

AUMT 1407 Automotive Electrical Systems 2-7-4
An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of charging and starting systems, and electrical accessories. Emphasis on electrical principle schematic diagrams and service manuals. Prerequisites: AUMT 1405 and 2305.

AUMT 1410 Automotive Brake Systems 2-6-4
Operation and repair of drum/disc type brake systems. Topics include brake theory, diagnosis, and repair of power, manual, anti-lock brake systems, and parking brakes. Prerequisite: AUMT 1405.

AUMT 1416 Automotive Suspension and Steering Systems 2-6-4
Diagnosis and repair of automotive suspension and steering systems including electronically controlled systems. Includes component repair, alignment procedures and tire and wheel service. Prerequisite: AUMT 1405.

AUMT 1419 Automotive Engine Repair 3-3-4
Fundamentals of engine operation, diagnosis and repair. Emphasis on identification, inspection, measurements, and disassembly, repair, and reassembly of the engine. Prerequisites: AUMT 2434.

AUMT 1445 Automotive Climate Control Systems 2-6-4
Diagnosis and repair of manual/electronic climate control systems; includes the refrigeration cycle and EPA guidelines for refrigerant handling. Prerequisites: AUMT 2437.

AUMT 1472 Automotive Computer Systems 2-7-4
This course provides the student with a working knowledge of automotive computer systems. It includes principles of operation, components and function, tools and test equipment, diagnosis, and service and repair of automotive computerized systems. Prerequisites: AUMT 2437.

AUMT 2305 Automotive Engine Theory 2-2-3
Fundamentals of engine operation and diagnosis including lubrication and cooling systems. Emphasis on identification of components, measurements, inspections, and repair methods. Prerequisite: AUMT 1405.

AUMT 2413 Automotive Drive Train and Axles 2-6-4
A study of automotive clutches, clutch operation devices, manual transmissions/transaxles, and differentials with emphasis on the diagnosis and repair. Prerequisite: AUMT 1405.

AUMT 2417 Automotive Engine Performance Analysis I 2-7-4
Theory, operation, diagnosis of drivability concerns, and repair ignition and fuel delivery systems. Use of current engine performance diagnostic equipment. Prerequisites: AUMT 2437.

AUMT 2425 Automotive Automatic Transmission and Transaxle 2-6-4
A study of the operation, hydraulic circuits and electronic controls of modern automatic transmissions/transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and repair techniques. Prerequisite: AUMT 2413.

AUMT 2434 Automotive Engine Performance Analysis II 2-7-4
Diagnosis and repair of emission systems, computerized engine performance systems, and advanced ignition and fuel systems. Includes use of advanced engine performance diagnostic equipment. Prerequisites: AUMT 2417.

AUMT 2437 Automotive Electronics 3-3-4
Study of electronic principles applied to microcomputers and communication systems. Includes digital fundamentals, and use of electronic test equipment. Prerequisites: AUMT 1407.

AUMT 2488 Internship - Automobile/Automotive Mechanics Technology/Technician 0-19-4
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 employer. Prerequisite: Department approval required.

AVIM Aviation Science see also AIRP

AVIM 2331 Airline Management 3-0-3
An examination of the organization, operation, and management of airlines. Topics include financing, aircraft selection, route feasibility studies, load factors, and marketing.

BCIS Computer Science see also COSC

BCIS 1405 Business Computer Applications 3-3-4
Computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the internet. Prerequisite: None.

BIOL Biology

BIOL 1308 Biology for Non Science Majors I 3-0-3
Provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. This course does not fulfill the Science requirement necessary for the completion of the Core Curriculum, the Associate of Science degree and the Associate of Arts degree.

BIOL 1322 Nutrition and Diet Therapy I 3-0-3
Study of the chemical, physical, and sensory properties of food; nutritional quality; and food use and diet applications. This course does not fulfill the Science requirement necessary for the completion of the Core Curriculum, the Associate of Science degree and the Associate of Arts degree.

BIOL 1406 Biology for Science Majors I 3-3-4
Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included. Prerequisite: Appropriate placement score or completion of the appropriate level of Developmental Studies course. Co-requisite: BIOX 1406.

BIOL 1407 Biology for Science Majors II 3-3-4
The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Prerequisite: Appropriate placement score or TSI exemption or completion of the appropriate level of Developmental Studies course. Co-requisite: BIOX 1407.

BIOL 1408 Biology for Non-Science Majors I 3-3-4
This lecture and lab course provides a survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction.

BIOL 1411 General Botany 3-3-4
Fundamental biological concepts relevant to plant physiology, life cycle, growth and development, structure and function, and cellular and molecular metabolism. The role of plants in the environment, evolution, and phylogeny of major plant groups, algae, and fungi. Laboratory activities will reinforce fundamental biological concepts relevant to the course material. Co-requisite: BIOX 1411. Completion of BIOL 1406 is recommended prior to enrollment in this course.

BIOL 1413 General Zoology 3-3-4
Fundamental biological concepts relevant to animals, including systematics, evolution, structure and function, cellular and molecular metabolism, reproduction, development, diversity, phylogeny, and ecology. Lab activities will reinforce concepts discussed in lecture. Co-requisite: BIOX 1413. Recommended prerequisite: Successful completion of College Algebra or concurrent enrollment in higher level mathematics is recommended.

BIOL 2401 Anatomy and Physiology I 3-3-4
Study of the structure and function of the human body. Main systems covered include; skeletal system, muscular system, integumentary system, immune system, digestive system, urinary system, lymphatic system, and reproductive system. Co-requisite: BIOX 2401. Completion of BIOL 1406 is recommended.

BIOL 2402 Anatomy and Physiology II 3-3-4
Study of the structure and function of the human body. Emphasis is on the function of body systems and interactions among body systems with emphasis on cardiovascular, respiratory, nervous, and endocrine systems. Integration of body systems is emphasized. Problem solving and interpretation of biomedical research is also stressed. Prerequisite: BIOL 2401 with a grade of "C" or better; must have been taken within the last five years. Co-requisite: BIOX 2402.

BIOL 2420 Microbiology for Non-science Majors 3-3-4
Study of the morphology, physiology, and taxonomy of representative groups of pathogenic and nonpathogenic microorganisms. Pure cultures of microorganisms grown on selected media are used in learning laboratory techniques. Includes a brief preview of food microbes, public health, and immunology. Co-requisite: BIOX 2420.

BIOL 2421 Microbiology for Science Majors 3-3-4
Principles of microbiology, including metabolism, structure, function, genetics, and phylogeny of microbes. The course will also examine the interactions of microbes with each other, hosts, and the environment. Prerequisite: CHEM 1411 and (BIOL 1406 and BIOL 1407) OR (BIOL 1411 AND BIOL 1413). Co-requisite BIOX 2421.

BIOL 2428 Vertebrate Zoology 3-3-4
Structure, development, physiology, and natural history of the vertebrate animals with emphasis on comparative evolution. Prerequisite: BIOL 1406, 1407, or 1413. Completion of a college level science course is recommended. Co-requisite: BIOX 2428.

BMGT Business Administration and Management see also BUSG, HRPO and MRKG

BMGT 1301 Supervision 3-0-3
A study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined.

BMGT 1325 Office Management 3-0-3
Systems, procedures, and practices related to organizing and planning office work, supervising employees' performance, and exercising leadership skills.

BMGT 1327 Principles of Management 3-0-3
Concepts, terminology, principles, theory, and issues that are in the field of management.

BMGT 2370 Management Applications I 1-5-3
A management laboratory that emphasizes management decision-making skills that are necessary for the modern manager to successfully deal with resource problems in the work place and career field. The course is designed for students desiring to further their management training by applied learning techniques utilizing decision-making case studies, computer-assisted models, or other instructional techniques. It serves as a program Capstone for those students whose situation precludes an internship. The course may be repeated (if topics and learning outcomes vary). Note: Should be taken during the last semester of a certificate program or at about the halfway point in a degree plan. Prerequisite: Consent of the Department Chair.

BMGT 2371 Management Applications II 1-5-3
A management laboratory that emphasizes management decision-making skills that are necessary for the modern manager to successfully deal with resource problems in the work place and career field. The course is designed for students desiring to further their management training by applied learning techniques utilizing decision-making case studies, computer-assisted models, or other instructional techniques. It serves as a program Capstone for those students whose situation precludes an internship. Prerequisite: BMGT 2370 and Consent of the Department Chair.

BMGT 2488 Internship - Business Administration and Management, General 0-19-4
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. Prerequisite: Consent of the Department Chair.

BMGT 2489 Internship - Business Administration and Management, General 0-19-4
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. Prerequisites: BMGT 2488 and Consent of the Department Chair.

BUSG Business Administration and Management see also BMGT, HRPO and MRKG

BUSG 1315 Small Business Operations 3-0-3
Central Campus Only. A course in the unique aspects of operating a small business. Emphasizes management functions, planning, heading, organizing, staffing and controlling Enactus operations. Members of the organization that participate during the entire training program and document a minimum of 50 hours of active participation, can be awarded credit for this course with the approval of the Enactus Faculty Advisor.

BUSG 1370 Small Business Accounting 3-0-3
A course designed to introduce small business owners to basic accounting/financial information necessary to the successful operation of a business. Topics covered include, but are not limited to, cost behavior, cost-volume-profit relationships, budgeting, relevant cost, pricing decisions, payroll accounting and taxes.

BUSG 1371 Entrepreneurship and Business Plan Development 3-0-3
Involves the development and presentation of a plan to create or expand a business. It provides the student with an opportunity to develop and demonstrate a mastery of the essential competencies required for business opportunity analysis, the development of a marketing plan, and the development of a business financial plan. Students will prepare a business plan for a business that they want to develop or expand.

BUSG 2305 Business Law/Contracts 3-0-3
Principles of law which form the legal framework for business activity including applicable statutes, contracts, and agency.

BUSG 2309 Small Business Management 3-0-3
A course on starting, operating and growing a small business. Topics include facts about a small business, essential management skills, how to prepare a business plan, accounting, financial needs, staffing, marketing strategies and legal issues.

BUSI Business Administration and Management

BUSI 1301 Business Principles 3-0-3
Introduction to the role of business in modern society. Includes overview of business operations, analysis of the specialized fields within the business organization, and development of a business vocabulary.

BUSI 1307 Personal Finance 3-0-3
Personal and family accounts, budgets and budgetary control, bank accounts, charge accounts, borrowing, investing, insurance, standards of living, renting or home ownership, and wills and trust plans.

BUSI 2301 Business Law 3-0-3
Principles of law which form the legal framework for business activity.

CBFM Maintenance Technology see also CNBT, ELPT, MBST, PFPB, and WDWK

CBFM 1334 Interior and Exterior Painting and Refinishing 2-4-3
Interior and exterior painting and refinishing for commercial and residential applications. Prerequisite: CRPT 1429.

CBFM 2487 Internship–Building/Property Maintenance and Manager 0-19-4
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 employer. Prerequisite: Department approval required.

CDEC Child Development

CDEC 1170 Deployment and Military Families (Europe/PFEC only) 1-0-1
This course explores the effects of deployments on military families and children. Techniques for supporting children of military families during deployments will be covered.

CDEC 1172 Mentoring for Early Childhood Educators (Europe/PFEC only) 1-0-1
This course covers an in-depth look at early childhood mentoring, an important professional facet of a teacher's development. Students will explore what it means to be a mentor and work directly with new people entering into the early childhood field. This is a practical course designed to teach skills to new and experienced mentors in Early Childhood Education.

CDEC 1173 Parenting for Healthy Families (Europe/PFEC only) 1-0-1
This course covers different models of parenting, and includes identification and reflection, of one's chosen style of parenting. The effects of parenting methods on children as well as a model of parenting that is correlated with healthy children will be presented and taught.

CDEC 1174 Technology in the Classroom (Europe/PFEC only) 1-0-1
This course is designed to teach the specific use of technology in the classroom, including preschool management software, recording children's work, and current software available for brochures, flyers, etc., that will be used commonly for preschool/school settings. Recommended for the student who has completed 3 credit hours of computer studies.

CDEC 1164 Practicum (or Field Experience) - Child Develoment 0-7-1
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Requires 112 hours at an approved Child Care facility. Prerequisite CDEC 1313 and CDEC 1319.

CDEC 1303 Families, School and Community 3-1-3
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 for 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.

CDEC 1311 Educating Young Children 3-1-3
An 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. Course content is aligned with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. 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.

CDEC 1313 Curriculum Resources for Early Childhood Programs 3-0-3
A study of the fundamentals developmentally appropriate curriculum design and implementation in early care and education programs for children birth through age 8.

CDEC 1317 Child Development Associate Training I 2-2-3
Based on the requirements for the Child Development Associate credential (CDA). Topics include CDA overview, observation skills, and child growth and development. The four functional areas of study are creative, cognitive, physical, and communication. 32 hour lab required.

CDEC 1318 Wellness of the Young Child 3-1-3
Factors impacting the well-being of young children. Includes healthy behavior, food, nutrition, fitness, and safety practices. 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. 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.

CDEC 1319 Child Guidance 3-0-3
An exploration of guidance strategies for promoting pro-social behaviors with individual and groups of children. Emphasis on positive guidance principles and techniques, family involvement, and cultural influences.

CDEC 1321 The Infant and Toddler 3-0-3
A study of appropriate infant and toddler (birth to 3 years) programs, including an overview of development, quality caregiving routines, appropriate environments, materials and activities, and teaching/guidance techniques.

CDEC 1354 Child Growth & Development 3-0-3
A study of the principles of normal child growth and development from conception to adolescence. Focus on physical, cognitive, social, and emotional domains of development.

CDEC 1356 Emergent Literacy for Early Childhood 3-0-3
An exploration of principles, methods, and materials for teaching language and literacy through a play-based, integrated curriculum to children from birth through age 8.

CDEC 1358 Creative Arts for Early Childhood 3-0-3
An exploration of principles, methods, and materials for teaching music, movement, visual arts, and dramatic play through process-oriented experiences to support divergent thinking for children from birth through age 8.

CDEC 1359 Children with Special Needs 3-0-3
A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, intervention strategies, available resources, referral processes, and the advocacy role and legislative issues.

CDEC 2164 Practicum (or Field Experience) - Child Develoment 0-7-1
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Requires 112 hours at an approved Child Care facility. Prerequisite CDEC 1164.

CDEC 2288 Internship Child Care Provider/ Assistant 0-12-2
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. Student's final course. 192 hours required at student's qualifying place of employment; or an approved site, must work directly with young children, ages 0-8.

CDEC 2307 Math & Science for Early Childhood 3-0-3
An exploration of principles, methods, and materials for teaching children math and science concepts through discovery and play.

CDEC 2322 Child Development Associate Training II 2-2-3
A continuation of the study of the requirements for the Child Development Associate (CDA) National Credential. The six functional areas of study include safety, health, learning environment, self, social, and guidance.32 hour lab required.

CDEC 2324 Child Development Associate Training III 2-2-3
Continuation of the requirements for the Child Development Associate credential (CDA). The three functional areas of study include family, program management and professionalism. 32 hour lab required.

CDEC 2326 Administration of Programs for Children I 3-0-3
Application of management procedures for early care and education programs. Includes planning, operating, supervising, and evaluating programs. Topics cover philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation, and communication.

CDEC 2328 Administration of Programs for Children II 3-0-3
An in-depth study of the skills and techniques in managing early care and education programs, including legal and ethical issues, personnel management, team building, leadership, conflict resolution, stress management, advocacy, professionalism, fiscal analysis, and planning parent education/ partnerships.

CETT Computer Electronics Technology see also CPMT, CSIR, EECT, ELMT, HART, ITCC and ITNW

CETT 1403 DC Circuits 3-3-4
A study of the fundamentals of direct current including Ohm's law, Kirchhoff's laws and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements.

CETT 1405 AC Circuits 3-3-4
A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Prerequisite: CETT 1403.

CETT 1421 Electronic Fabrication 3-3-4
A study of electronic circuit fabrication techniques including printed circuit boards, wire wrapping, bread boarding, and various soldering techniques.

CETT 1425 Digital Fundamentals 3-3-4
An entry level course in digital electronics covering number systems, binary mathematics, digital codes, logic gates, Boolean algebra, Karnaugh maps, and combinational logic. Emphasis on circuit logic analysis and troubleshooting digital circuits.

CETT 1429 Solid State Devices 3-3-4
A study of diodes and bipolar semiconductor devices, including analysis of static and dynamic characteristics, bi techniques, and thermal considerations of solid state devices. Prerequisite: CETT 1405.

CETT 1441 Solid State Circuits 3-3-4
A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis. Prerequisite: CETT 1429.

CETT 1449 Digital Systems 3-3-4
A course in electronics covering digital systems. Emphasis on application and troubleshooting digital systems using counters, registers, code converters, multiplexers, analog-to-digital to-analog circuits, and large-scale integrated circuits. Prerequisites CETT 1425 and CETT 1429.

CETT 1491 Special Topics in Computer Engineering Technology/Technician 3-3-4
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. This course was designed to be repeated multiple times to improve student proficiency. Prerequisites CETT 1429 and CETT 1449.

CETT 1509 DC-AC Circuits 4-3-5
Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchhoff's laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques.

CETT 2449 Research and Project Design 3-3-4
Principles of electrical/electronic design encompassing schematics wiring diagrams, materials lists, operating characteristics, completion schedules, and cost estimates. Prerequisites: CETT 1429 and CETT 1449.

CETT 2489 Internship-Computer Engineering Technology/Technician 0-19-4
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. Prerequisite: Department approval required.

CHEF Hospitality Management see also HAMG, IFWA, PSTR, RSTO and TRVM

CHEF 1301 Basic Food Preparation 1-8-3
A study of the fundamental principles of food preparation and cookery to include Brigade System, cooking techniques, material handling, heat transfer, sanitation, safety, nutrition, and professionalism. National Restaurant Association (NRA) Food Production Certificate Examination.

CHEF 1302 Principles of Healthy Cuisine 1-7-3
Introduction to the principles of planning, preparation, and presentation of nutritionally balanced meals. Adaptation of basic cooking techniques to lower the fat and caloric content. Alternative methods and ingredients will be used to achieve a healthier cooking style. Prerequisite: CHEF 1301.

CHEF 1305 Sanitation and Safety 3-0-3
A study of personal cleanliness; sanitary practices in food preparation; causes, investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards.

CHEF 1341 American Regional Cuisine 2-4-3
A study of the development of regional cuisine in the United States with emphasis on the similarities in production and service systems. Application of skills to develop, organize, and build a portfolio of recipe strategies and production systems. Prerequisite: CHEF 1301.

CHEF 1345 International Cuisine 2-4-3
The study of classical cooking skills associated with the preparation and service of international and ethnic cuisine. Topics include similarities between food production systems used in the United States and other regions of the world. Prerequisite: CHEF 1301.

CHEF 1410 Garde Manger 2-6-4
A study of specialty foods and garnishes. Emphasis on design, techniques, and display of fine foods. Prerequisite: CHEF 1301.

CHEF 2301 Intermediate Food Preparation 1-8-3
Continuation of previous food preparation course. Topics include the concept of pre-cooked food items, as well as scratch preparation. Covers full range of food preparation techniques. Prerequisite: CHEF 1301.

CHEF 2302 Saucier 2-3-3
Instruction in the preparation of stocks, soups, classical sauces, contemporary sauces, accompaniments, and the pairing of sauces with a variety of foods. Prerequisite: CHEF 1301.

CHEF 2332 Buffet Theory and Production 2-4-3
Advanced concepts in the construction of inedible display items. Emphasis on buffet production, presentation, and service. The student will produce tallow, butter, and ice sculptures, and organize a buffet layout. Prerequisite: CHEF 1301.

CHEM Chemistry

CHEM 1406 Introductory Chemistry I 3-3-4
This course is a survey of the fundamentals of general chemistry with applications from medicine, modern living, agriculture, and the environment. This course is designed for non-science majors who need a lab science credit, for nursing students seeking a B.S. degree or background for physiology, and also for students who have very little or no chemical background. Prerequisite: Appropriate placement score or completion of the appropriate level of Developmental Studies course. Co-requisite: CHEX 1406.

CHEM 1407 Introductory Chemistry II 3-3-4
A survey of the fundamentals of organic and biochemistry for nursing students interested in the processes of life. Basic principles, nomenclature, principle reactions and methods of synthesis, and the major classes of physiologically important compounds are studied. Prerequisite: CHEM 1406, or CHEM 1411. Co-requisite: CHEX 1407.

CHEM 1411 General Chemistry I 3-3-4
The first of two courses covering the fundamental principles of chemistry for majors in the sciences, health sciences, and engineering. Topics include measurements, fundamental properties of matter, states of matter, chemical reactions, chemical stoichiometry, periodicity of elemental properties, atomic structure, chemical bonding, molecular structure, solutions, properties of gases, and an introduction to thermodynamics and descriptive chemistry. Emphasis is placed on problem solving. Prerequisite: Student must have completed MATH 1414 with a grade of "C" or better within the last 5 years. Co-requisite: CHEX 1411.

CHEM 1412 General Chemistry II 3-3-4
The second of two courses covering the fundamental principles of chemistry for majors in the sciences, health sciences, and engineering. Topics include chemical equilibrium; phase diagrams and spectrometry; acid-base concepts; thermodynamics; kinetics; electrochemistry; nuclear chemistry; an introduction to organic chemistry and descriptive inorganic chemistry. Emphasis is placed on problem solving. Prerequisite: CHEM 1411. Co-requisite: CHEX 1412.

CHEM 2423 Organic Chemistry I 3-4-4
The first of two courses designed to provide a foundation in organic chemistry. Fundamental principles of organic chemistry will be studied, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. This course is intended for students in science or pre-professional programs. Prerequisites: CHEM 1411 and CHEM 1412. Co-requisite: CHEX 2423.

CHEM 2425 Organic Chemistry II 3-4-4
As a continuation of CHEM 2423, this course involves a more in-depth study of some of the topics covered in CHEM 2423. Advanced principles of organic chemistry will be studied, including the structure, properties, and reactivity of aliphatic and aromatic organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. This course is intended for students in science or pre-professional programs. Prerequisite: CHEM 2423. Co-requisite: CHEX 2425.

CHIN Chinese

CHIN 1311 Beginning Chinese I 3-0-3
Fundamental skills in listening, comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

CHIN 1312 Beginning Chinese II 3-0-3
Fundamental skills in listening, comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Prerequisite: CHIN 1311 with a grade of "C" or above.

CHIN 1411 Beginning Chinese I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

CHIN 1412 Beginning Chinese II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: CHIN 1411 with a grade of "C" or above.

CHIN 2311 Intermediate Chinese I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisite: CHIN 1411 and 1412 with a grade of "C" or above.

CHIN 2312 Intermediate Chinese II 3-0-3
This course continues reading, drill on syntax as needed for reading, composition, and conversation. Prerequisite: CHIN 2311 with a grade of "C" or above.

CHLT Mental Health Services See also CMSW, DAAC, PSYT and SCWK

CHLT 1309 Community Ethics 2-4-3
Discussion of the role of ethics as it pertains to healthcare and community settings including ethical decision-making. This course examines professional and legal conduct in human services.

CJCR Criminal Justice See also CJLE and CJSA

CJCR 1304 Probation and Parole 3-0-3
A survey of the structure, organization, and operation of probation and parole services. Emphasis on applicable state statutes and administrative guidelines.

CJCR 1307 Correctional Systems and Practices 3-0-3
Corrections in the criminal justice system; organization of correctional systems; correctional role; institutional operations; alternatives to institutionalization; treatment and rehabilitation; current and future issues.

CJCR 1358 Rights of Prisoners 3-0-3
Analysis of the legal rights of the convicted offender incarcerated in state and federal penal institutions. Emphasis on constitutional principles, case law, and federal and state statutes concerning prisoner rights.

CJCR 1391 Special Topics in Corrections/Correctional Administration 3-0-3
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. Prerequisites: Consent of the Department Chair.

CJCR 1400 Basic Jail Course 4-1-4
Provides instruction in human relations; observation; evaluation of prisoners, booking procedures; classification; mug shots; fingerprinting, strip searches; meals, medical services, visitation; inmates rights and privileges; detention areas; key; knife and tool control; disturbances; riots; fire procedures; and release procedures. Taught in accordance with the current TCLEOSE instructor guides provided by the Commission for course #1005.

CJCR 2324 Community Resources in Corrections 3-0-3
An introductory study of the role of the community in corrections; community programs for adults and juveniles; administration of community programs; legal issues; future trends in community treatment.

CJCR 2325 Legal Aspects of Corrections 3-0-3
A study of the operation, management, and legal issues affecting corrections. Analysis of constitutional issues involving rights of the convicted, as well as civil liability of correctional agencies and staff.

CJCR 2466 Practicum (or Field Experience) Corrections/Correctional Administration 0-28-4
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: Consent of the Department Chair.

CJLE Criminal Justice see also CJCR and CJSA

CJLE 1211 Basic Firearms 1-2-2
Instruction in firearm safety, cleaning and care techniques, proper shooting principles, and proficiency with a handgun and shotgun. Prerequisite: Department approval required.

CJLE 1333 Traffic Law and Investigation 3-0-3
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 the police role in accident investigation and traffic supervision.

CJLE 1345 Intermediate Crime Scene Investigation 3-0-3
Topics include objectives, preparations, procedures, and methods of crime scene search; value of crime scene sketches and their relationship to crime scene photographs; fingerprints as physical evidence, fingerprint identification and classification, types of impressions and techniques for locating and developing impressions. Prerequisites: CRIJ 2314/CJSA 1342 or Police Academy.

CJLE 2345 Vice and Narcotics Investigation 3-0-3
Study of various classifications of commonly used narcotics, dangerous drugs, gambling, sex crimes, fraud, gangs, and investigative techniques; and identify proper interdiction procedures and techniques. Prerequisite: CRIJ 2314/CJSA 1342.

CJLE 2486 Internship-Criminal Justice/ Police Science 0-19-4
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. Prerequisite: Consent of the Department Chair.

CJSA Criminal Justice see also CJCR and CJLE

CJSA 1170 Alcohol Awareness/Intervention 1-0-1
This course will provide the student with a basic overview of alcohol as a drug of abuse and the methodology for developing an action plan of intervention at a local level. Focus on alcohol fueled offenses and problems, identifying and dealing with alcohol abusers and the criminal justice implications of alcohol related convictions.

CJSA 1171 Police Brutality 1-0-1
This course will provide students with basic information about the excessive use of force by police. The police have the right to use force to subdue criminals; even deadly force is authorized in certain situations. This course addresses what triggers the excessive use of force, what the consequences are to the police and society when this happens, and how it can be prevented.

CJSA 1172 Topics for Parents 1-0-1
The course will focus on areas of concern for today's parents; on-line predators, teenage alcohol and drug abuse and teenage domestic violence. This course will provide students with knowledge concerning these areas that will provide additional avenues of communication.

CJSA 1173 Drug Recognition for Law Enforcement 1-0-1
The course will provide the student with the basics of the most common controlled substances a law enforcement officer will encounter. The student will gain knowledge of classifications of, identification of, and effects of "street drugs".

CJSA 1174 Terrorism as a Strategy 1-0-1
The course will consider the definition of terrorism and its place in the spectrum of political violence as well as comparing different classifications of insurgency. The course will introduce students to how terrorism is used as a strategy of insurgency and how it is a strategy based on the psychological impact.

CJSA 1175 Investigation of Sexual Abuse 1-0-1
This course discusses the different formats used to investigate the crime of sexual assault. It includes strategies to investigate sexual assault, interview victims and witnesses, document evidence in accordance with state laws, and conduct case studies.

CJSA 1176 Introduction to Gangs and Gang Infiltration of the Military 1-0-1
This course offers an introduction to gangs in America and the infiltration of gangs in the United States military. Topics include gang identification, the role of the criminal justice system and the community in suppressing, intervening and preventing gang activity, how and why gang members join the military and the impact of gangs on the military.

CJSA 1177 International Criminal Justice 1-0-1
This course will provide an introduction to the history, policy, and practices of criminal justice in an international environment. The history of the development of the laws and judicial structures that serve to administer international criminal justice will be examined, particularly post World War II. The agencies involved in international criminal justice, from INTERPOL to the Federal Bureau of Investigation, will be studied as will the differing policing practices in particular comparative cases. Specific attention will be paid to the international issues arising for criminal justice practitioners in both domestic and foreign jurisdictions and the bodies of international law that will affect a criminal justice practitioner. Finally, the 21st Century international terrorist threat will be studied for its affects on the practice of criminal justice in civil and military contexts.

CJSA 1178 Criminal Deviance 1-0-1
This course is an examination of criminal behavior with a special emphasis on the deviation from societal norms. The course will discuss ideas about crime, criminal intent, and criminal motivation. The course offers a survey of theories and research on the rationality of criminal behavior and stimulus of offenders. The course also offers a review of the social response to criminal behavior.

CJSA 1192 Special Topics in Criminal Justice/Law Enforcement Administration 1-0-1
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.

CJSA 1302 Private Security Officer Training 3-0-3
A critical study of the provisions of the Texas Private Investigators and Private Security Agencies Act. Topics include the impact of the code on procedures and policies, judicial interpretation of statutes and related procedures, and rules and regulations. Satisfies the requirements for Commissioned Security Officer Skill Certification. Prerequisite: Consent of Department Chair.

CJSA 1308 Criminalistics I 3-0-3
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. Prerequisites: CRIJ 2314/CJSA 1342.

CJSA 1312 Crime in America 3-0-3
The study of American crime problems in historical perspective, social and public policy factors affecting crime, impact and crime trends, social characteristics of specific crimes, and crime prevention.

CJSA 1313 Court Systems and Practices 3-0-3
The judiciary in the criminal justice system; structure of the American court system; prosecution; right to counsel; pre-trial release; grand juries; adjudication process; types and rules of evidence, sentencing.

CJSA 1317 Juvenile Justice System 3-0-3
A study of the juvenile justice process. Topics include specialized juvenile law, role of the juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency.

CJSA 1318 Court Management 3-0-3
Exploration of operational issues in the administration of American courts. Topics include responsibilities of court personnel, records management, and organizational management topics.

CJSA 1322 Introduction to Criminal Justice 3-0-3
The study of the history and philosophy of criminal justice and ethical considerations; crime defined; its nature and impact; overview of criminal justice system; law enforcement, court system; prosecution and defense; trial process; corrections.

CJSA 1327 Fundamentals of Criminal Law 3-0-3
A study of the nature of criminal law; philosophical and historical development; major definitions and concepts; classification of crime; elements of crimes and penalties using Texas statutes as illustrations; criminal responsibility.

CJSA 1342 Criminal Investigation 3-0-3
Study of investigative theory, the collection and preservation of evidence, sources of information, concepts of interviewing and interrogation, the use of forensic sciences, case and trial preparation.

CJSA 1348 Ethics in Criminal Justice 3-0-3
Ethical philosophies and issues pertaining to the various professions in the criminal justice system. Includes ethical issues emanating from constitutional conflict with public protection and individual rights, civil liberties, and correctional policies.

CJSA 1351 Use of Force 3-0-3
A study of the use of force including introduction to and statutory authority for the use of force, force options, deadly force, and related legal issues. Fulfills the TCLEOSE Use of Force Intermediate Certificate requirement. Prerequisite: Consent of Department Chair.

CJSA 1359 Police Systems and Practices 3-0-3
Exploration of the profession of police officer. Topics include organization of law enforcement systems, the police role, police discretion, ethics, police-community interaction, and current and future issues.

CJSA 1393 Special Topics in Criminal Justice Studies 3-0-3
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: CRIJ 1301/CJSA 1322 and consent of Department Chair.

CJSA 2300 Legal Aspects of Law Enforcement 3-0-3
Exploration of police authority. Topics include responsibilities and constitutional constraints, law of arrest, search and seizure, and police liability.

CJSA 2302 Police Management, Supervision, and Related Topics 3-0-3
Techniques and theories regarding dealing with people, their performance and problems. Topics include basic supervision, leadership, time management, first-line supervision, and management by objectives.

CJSA 2331 Child Abuse, Prevention and Investigation 3-0-3
Forms of child abuse and neglect and the traits of typical abusers. Includes strategies to investigate abuse, interview victims and witnesses, document evidence in accordance with state law, and conduct case studies. Prerequisites: CRIJ 2314/CJSA 1342 or CRIJ 1313/CJSA 1317, or Police Academy.

CJSA 2488 Internship-Criminal Justice Safety Studies 0-19-4
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. Prerequisite: Consent of the Department Chair.

CMSW Mental Health Services see also CHLT, DAAC, PSYT and SCWK

CMSW 1166 Practicum (or Field Experience) - Clinical/Medical Social Work 0-8-1
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

CMSW 1167 Practicum (or Field Experience) - Clinical and Medical Social Work 0-10-1
This course provides the student with practical general training and experience in the workplace through assignment to a specific field placement site under the supervision of professionals from the host agency. This course is the Capstone Experience for students exiting the program with a Certificate or Associates in Applied Science (AAS) Degree in Mental Health Services with an At-Risk Youth Specialization, or an AAS with a Social Work Specialization. Prerequisites: Departmental Approval, CMSW 1309, DAAC 1319, DAAC 2354, PSYT 1329, PSYT 2321, PSYT 2331.

CMSW 1309 Problems of Children and Adolescents 2-4-3
Examine common problems and evaluate effective intervention models of at-risk children and youth. Topics include: social, family, educational systems impact, mental health, juvenile delinquency, teen sexuality, and additive behaviors. Articulate common problems and characteristics of at-risk children and youth in the social, family, and educational systems; investigate intervention models; and describe juvenile laws.

CNBT Maintenance Technology see also CBFM, CRPT, ELPT, MBST, PFPB and WDWK

CNBT 1446 Construction Estimating I 3-3-4
Fundamentals of estimating materials and labor costs in construction.

COMM Communications/Journalism

COMM 1307 Introduction to Mass Communication 3-0-3
Instruction to mass media of the modern world. A survey of all mass media, their purposes, and their methods of operation.

COMM 2305 Editing and Layout 2-2-3
Enables students to develop an understanding of the newsroom organization and the entire news/editorial process. Students perform copy editing for errors of fact, interpretation, and grammar. Emphasis is on developing a regard for accuracy and fairness in the editing and design process. Prerequisite: COMM 2311.

COMM 2311 News Gathering and Writing I 3-2-3
Fundamentals of writing news for the mass media. Includes instruction in methods and techniques for gathering, processing, and delivering news in a professional manner.

COMM 2315 News Gathering and Writing II 3-2-3
Continuation of the aims and objectives of News Gathering and Writing I with emphasis on advanced reporting techniques. Prerequisite: COMM 2311 or consent of the Department Chair.

COMM Radio/Television Broadcasting Communications

COMM 1238 Television Production III (Directing/Producing) 2-4-2
Study and practical experience with television production control equipment including switchers, audio consoles, special effects and graphics. Prerequisite: COMM 1336.

COMM 1335 Survey of Radio/TV 3-0-3
Study of the development, regulation, economics, social impact and industry practices in broadcasting and cable communication. Includes non-broadcast television and radio, new technologies, and other communication systems.

COMM 1336 Television Production I (Studio) 3-3-3
Study and practical experience with television studio production equipment including cameras, lighting, audio, sets and communication with talent.

COMM 1337 Television Production II (Field) 3-3-3
Study and practical experience in the operation of television field production equipment including cameras, lighting, audio, video storage and editing systems.

COMM 2303 Audio/Radio Production 2-2-3
Concepts and techniques of sound production, including the coordinating and directing processes. Hands-on experience with equipment, sound sources, and direction of talent.

COMM 2324 Practicum in Electronic Media (Audio) 2-4-3
Study and practical experience in digital audio production systems and software including multi-track recording techniques, processing and special effects. Prerequisite: COMM 2303.

COMM 2326 Practicum in Electronic Media (Special Projects) 2-3-3
Lecture and laboratory instruction and participation in special project production. Prerequisite: COMM 1337 or COMM 1336.

COMM 2327 Introduction to Advertising 3-0-3
Fundamentals of advertising including marketing theory and strategy, copy writing, and selection of media.

COMM 2331 Radio/Television Announcing 3-0-3
Principles of announcing: study of voice, diction, pronunciation, and delivery. Experience in various types of announcing. Study of phonetics will be included.

COMM 2332 Radio/Television News 3-3-3
Preparation and analysis of news gathering and presentation styles for the electronic media.

COMM 2339 Writing for Radio, TV, and Film 3-0-3
Introduction to basic script formats, terminology, and writing techniques, including the writing of commercials, public service announcements, promotional announcements, and other materials.

COMM 2389 Academic Cooperative 0-7-3
An instructional program designed to integrate on-campus study with practical hands-on work experience in a specific area of communication. Prerequisite: Consent of the Radio/TV Broadcasting Department Chair is required.

COSC Computer Science see also BCIS

COSC 1301 Introduction to Computing 3-1-3
Overview of computer systems-hardware, operating systems, and microcomputer application software, including the Internet, word processing, spreadsheets, presentation graphics, and databases. Current issues such as the effect of computers on society, and the history and use of computers in business, educational, and other modern settings are also studied. This course is not intended to count toward a student's major field of study in business or computer science.

CPMT Computer Electronics Technology see also CETT, CSIR, EECT, ELMT, HART, ITCC and ITNW

CPMT 1403 Introduction to Computer Technology 3-3-4
A fundamental computer course that provides in-depth explanation of the procedures to utilize hardware and software. Emphasis on terminology, acronyms, and hands-on activities.

CPMT 1404 Microcomputer Systems Software 3-3-4
Skills development in the installation, configuration, maintenance and troubleshooting of system software in microcomputers.

CPMT 1445 Computer Systems Maintenance 3-3-4
This course is designed to prepare student to challenge the Comp Tia A+ certification exam, providing an examination of the functions of the components within a computer system. Development of skills in the use of test equipment and maintenance aids to repair computer systems. Prerequisite: CETT 1425 and CETT 1429.

CPMT 1449 Computer Networking Technology 3-3-4
This course is designed to prepare student to challenge the Comp Tia Net+ certification exam. Topics include: networking fundamentals, terminology, hardware, software, and network architecture. The course includes hands-on activities reinforcing local area network (LAN) and wide area network (WAN) concepts and networking installations and operations. Prerequisite: CETT 1425 and CPMT 1403.

CPMT 2350 Industry Certification Preparation 2-3-3
Overview of the objectives for industry specific certification exam(s). Prerequisite: ITCC 2408.

CPMT 2445 Computer System Troubleshooting 3-3-4
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 1445.

CRIJ Criminal Justice

CRIJ 1301 Introduction to Criminal Justice 3-0-3
History, philosophy, and ethical considerations of criminal justice; the nature and impact of crime; and an overview of the criminal justice system, including law enforcement and court procedures.

CRIJ 1306 Court Systems and Practices 3-0-3
The study of the judiciary in the American criminal justice system and the adjudication processes and procedures.

CRIJ 1307 Crime in America 3-0-3
The study of American crime problems in historical perspective, social and public policy factors affecting crime, impact and crime trends, social characteristics of specific crimes, and prevention of crime.

CRIJ 1310 Fundamentals of Criminal Law 3-0-3
Study of criminal law, its philosophical and historical development, major definitions and concepts, classifications and elements of crime, penalties using Texas statutes as illustrations, and criminal responsibility.

CRIJ 1313 Juvenile Justice System 3-0-3
A study of the juvenile justice process. Topics include specialized juvenile law, role of the juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency.

CRIJ 2301 Community Resources in Corrections 3-0-3
An introductory study of the role of the community in corrections, community programs for adults and juveniles; administration of community programs; legal issues; future trends in community treatment.

CRIJ 2313 Correctional Systems and Practices 3-0-3
A study of the role of corrections in the criminal justice system. Topics include organization of correctional systems, correctional role, institutional operations, alternatives to institutionalization, treatments and rehabilitation, and current and future issues.

CRIJ 2314 Criminal Investigation 3-0-3
Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation.

CRIJ 2323 Legal Aspects of Law Enforcement 3-0-3
Exploration of police authority. Topics include responsibilities and constitutional restraints, law of arrest, search and seizure, and police liability.

CRIJ 2328 Police Systems and Practices 3-0-3
Exploration of the profession of police officer. Topics include organization of law enforcement systems, the police role, police discretion, ethics, police-community interaction, and current and future issues.

CRPT Maintenance Technology see also CBFM, CNBT, ELPT, MBST, PFPB and WDWK

CRPT 1411 Roof Systems 3-3-4
Principles of design and construction of a roof system incorporating gable, hip, and intersections. Emphasis given to safe work practices and the use and maintenance of tools and equipment. Prerequisite: CRPT 1429 and CRPT 1415.

CRPT 1415 Wall Systems 3-3-4
Identification of components; construction of wall systems; safe work practices; and the use and maintenance of tools and equipment. Prerequisite: CRPT 1429 and CRPT 1423.

CRPT 1423 Floor Systems 3-3-4
An introduction to common floor systems. Includes component identification; construction of a floor system; safe work practices; and the use and maintenance of tools and equipment. Prerequisite: CRPT 1429.

CRPT 1429 Introduction to Carpentry 3-3-4
An introduction to the carpentry trade including safety, tools, equipment, terminology, and methods.

CSIR Computer Electronics see also CETT, CPMT, EECT, ELMT, HART, ITCC and ITNW

CSIR 2351 Fiber Optic Communication System Installation and Repair 2-4-3
Focus on installation and repair of fiber optic communication systems including networks and peripherals. Topics include fiber optic technology; state-of-the-art networking systems; installation/repair of fiber optic systems; testing equipment.

CZEC Czech

CZEC 1311 Beginning Czech I 3-0-3
Fundamental skills in listening, comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

CZEC 1312 Beginning Czech II 3-0-3
Fundamental skills in listening, comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Prerequisite: CZEC 1311 with a grade of "C" or above.

DAAC Mental Health Services see also CHLT, CMSW, PSYT and SCWK

DAAC 1304 Pharmacology of Addiction 2-4-3
This course provides an emphasis on the pharmacological effects of addiction, tolerance, dependence, cross addiction, drug interactions, withdrawal, and recovery; describing the psychological and physiological effects of substance use. Recommended: DAAC 1319 be taken concurrently.

DAAC 1309 Assessment Skill of Alcohol and Other Drug Addictions 2-4-3
An exploration of the procedures and tools used to identify and assess a client's problems, strengths, deficits, and needs. Emphasis will be on practical application through the development of assessment documentation, case studies, and treatment plans. Prerequisites: DAAC 1304, DAAC 1319.

DAAC 1311 Counseling Theories 2-4-3
This course is an examination of the major theories and current treatment modalities used in the field of counseling. Prerequisite: PSYT 1329. Recommended prerequisite: PSYC 2301.

DAAC 1319 Introduction to Alcohol and Other Drug Addictions 2-4-3
An examination of the causes and consequences of addiction, the major drug classifications, and the counselor's code of ethics. Attention is given to family systems, special populations & diversity, prevention, intervention, & relapse prevention, and legal and professional issues in addiction counseling. An overview of competencies and requirements for licensure in Texas is covered. Recommended: DAAC 1304 to be taken concurrently.

DAAC 2301 Therapeutic Communities in a Criminal Justice Setting 2-2-3
The models of addiction counseling related to the treatment of incarcerated substance users are examined. This includes the application of ethical standards and laws that relate to addiction counseling. Information on relapse prevention and recovery programs is also covered. Prerequisites: DAAC 1304, DAAC 1309, DAAC 1319.

DAAC 2306 Substance Abuse Prevention I 2-2-3
Identify evidence-based prevention strategies within a cultural context; identify risk and protective factors for substance use disorders; describe resources for prevention program planning; and explain program evaluation methods.

DAAC 2307 Addicted Family Intervention 2-4-3
Examination of family systems focusing on the effects of addiction and recovery. Describe the effects of addiction on the family system; differentiate between various family treatment processes; identify the impact of additive behaviors as they relate to diverse family structures; and analyze the roles of the family members in the addictive and recovery process. Therapeutic alternatives as they relate to the family from a multicultural and trans-generational perspective will be addressed. Prerequisite: DAAC 1319.

DAAC 2341 Counseling Alcohol and Other Drug Addictions 2-4-3
This course is an advanced examination of skills, confidentiality and ethical guidelines applied in the counseling, treatment and recovery of substance use disorders. Required prerequisites: Departmental Approval, DAAC 1304, DAAC 1309, DAAC 2354, CMSW 1309, PSYT 1329, PSYT 2321, PSYT 2331.

DAAC 2353 Substance Abuse Prevention II 2-2-3
In-depth exploration of research, evaluation methods and best practices in prevention program design.

DAAC 2354 Dynamics of Group Counseling 2-4-3
Exploration of group counseling skills, techniques, and stages of group development, and confidentiality and ethics. Differentiate types of groups; describe the basic stages of the group process; demonstrate group management skills; produce client documentation; and identify issues of confidentiality. Prerequisites: Departmental Approval, CMSW 1309, DAAC 1304, DAAC 1319, PSYT 1329, PSYT 2321, PSYT 2331. Recommended prerequisite: PSYC 2301.

DAAC 2367 Practicum (or Field Experience) – Substance Abuse/Addiction Counseling 0-22-3
This advanced placement helps students gain practical experience in the discipline, enhances skills, and integrates knowledge gained from the classroom. Direct supervision at an advanced level is provided by clinical professionals at the host agency. This course is the Capstone Experience for students exiting the program with a Certificate or Associates in Applied Science (AAS) Degree in Chemical Dependency Counseling and the Certificate in Criminal Justice Addictions. Prerequisites: Departmental Approval, CMSW 1309, DAAC 1304, DAAC 1309, DAAC 1319, DAAC 2301, DAAC 2307, DAAC 2341, DAAC 2354, PSYT 1329, PSYT 2321, PSYT 2331.

DEMR Diesel

DEMR 1330 Steering and Suspension I 2-4-3
A study of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components. Prerequisite: DEMR 1401.

DEMR 1401 Shop Safety and Procedures 3-3-4
A study of shop safety, rules, basic shop tools, and test equipment.

DEMR 1405 Basic Electrical Systems 2-7-4
Basic principles of electrical systems of diesel powered equipment with emphasis on starters, alternators, and batteries. Prerequisites: DEMR 1406.

DEMR 1406 Diesel Engine I 3-3-4
An introduction to the basic principles of diesel engines and systems. Prerequisite: DEMR 1401.

DEMR 1410 Diesel Engine Testing and Repair I 2-6-4
An introduction to testing and repairing diesel engines including related systems specialized tools. Prerequisites: DEMR 1405.

DEMR 1416 Basic Hydraulics 2-7-4
Fundamentals of hydraulics including components and related systems. Prerequisite: DEMR 1401.

DEMR 1417 Basic Brake Systems 2-6-4
Basic principles of brake systems of diesel powered equipment. Emphasis on maintenance, repairs, and troubleshooting. Prerequisite: DEMR 1405.

DEMR 1421 Power Train I 2-7-4
Fundamentals, repair, and theory of power trains including clutches, transmissions, drive shafts, and differentials. Emphasis on inspection and repair. Prerequisites: DEMR 1416.

DEMR 1423 Heating, Ventilation and Air Conditioning, Troubleshooting and Repair 2-7-4
Introduction to heating, ventilation, and air conditioning theory, testing, and repair. Emphasis on refrigerant reclamation, safety procedures, specialized tools, and repairs. Prerequisite: DEMR 1405.

DEMR 1447 Power Train II 3-3-4
Continuation of fundamentals and theory of power train systems. Emphasis on disassembly, inspection, and repair of power train components. Prerequisites: DEMR 1421.

DEMR 1449 Diesel Engine II 2-7-4
An in-depth coverage of disassembly, repair, identification, evaluation, and reassembly of diesel engines. Prerequisites: DEMR 2434.

DEMR 2412 Diesel Engine Testing and Repair II 2-7-4
Coverage of testing and repairing diesel engines including related systems and specialized tools. Prerequisites: DEMR 1410.

DEMR 2434 Advanced Diesel Tune-Up and Troubleshooting 2-7-4
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. Prerequisites: DEMR 1410.

DEMR 2488 Internship-Diesel Mechanics Technology/Technician 0-19-4
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 employer. Prerequisite: Department approval required.

DFTG Computer-Aided Drafting and Design see also ARCE

DFTG 1405 Technical Drafting 3-3-4
Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes.

DFTG 1409 Basic Computer-Aided Drafting 3-3-4
An introduction to basic computer-aided drafting. Emphasis is placed on drawing setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinating systems; as well as input and output devices. Prerequisites: DFTG 1405 or concurrent enrollment.

DFTG 1417 Architectural Drafting - Residential 3-3-4
Architectural drafting procedures, practices, and symbols, including preparation of detailed working drawings for a residential structure with emphasis on light frame construction methods. All drawing assignments will be computer generated. Prerequisite: Sophomore standing in the Drafting Program.

DFTG 1458 Electrical/Electronics Drafting 3-3-4
A study of the principles of layout of 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. All drawing assignments will be computer generated. Prerequisite: Sophomore standing in the Drafting Program.

DFTG 2402 Machine Drafting 3-3-4
Production of detail and assembly drawings of machines, threads, gears, cams, tolerances and limit dimensioning, surface finishes, and precision drawings. Prerequisites: DFTG 1405, DFTG 2417, or concurrent enrollment.

DFTG 2412 Technical Illustration and Presentation 3-3-4
Introduction to pictorial drawings as used in industrial catalogs, assembly sheets, newspaper publications and promotional literature. Topics include pictorial drawing including isometrics, oblique, perspectives, charts, and graphs, shading, and use of different media including pencil and ink. Prerequisite: DFTG 1405, or concurrent enrollment

DFTG 2417 Descriptive Geometry 3-3-4
Examination of the graphical solution to problems involving points, lines, and planes in space. Prerequisite: DFTG 1405.

DFTG 2421 Topographical Drafting 3-3-4
A course in map drafting. Emphasis is given to plotting of surveyors field notes, plotting elevations, contour drawings, plan and profiles, and laying out traverses. All drawing assignments will be computer generated. Prerequisite: Second semester Sophomore standing in the Drafting Program.

DFTG 2423 Pipe Drafting 3-3-4
A study of pipe fittings, symbols, specifications and their applications to a piping process system. This application will be demonstrated through the creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics. All drawing assignments will be computer generated. Prerequisite: Sophomore standing in the Drafting Program.

DFTG 2438 Final Project - Advanced Drafting 3-3-4
A general drafting course in which students participate in a simulated project. The process from conception to conclusion is studied. All work done in this class will typify actual industrial projects. An employment resume, cover letter, and portfolio will be completed as part of the course requirements. All projects will be completed with the use of Computer-Aided Drafting (AutoCAD). Prerequisites: Second semester Sophomore standing in the Drafting program.

DFTG 2440 Solid Modeling/Design 3-3-4
A computer-aided modeling course. Development of three-dimensional drawings and models from engineering sketches and orthographic drawings and utilization of three-dimensional models in design work. Prerequisite: DFTG 1409.

DRAM Drama

DRAM 1310 Introduction to Theater 3-0-3
This course surveys all phases of theater including history, dramatic works, stage techniques, and their relation to fine arts. Prerequisite: None.

DRAM 1320 Theater Practicum I 2-4-3
This course will be used as a laboratory for the exploration, development and synthesis of all the elements of theater. This course supplements other theater courses that concentrate on theories, information, and techniques by providing for the integration and implementation of those ideas and skills. Practical acting and production are provided through the preparation and public performance of one or more plays.

DRAM 1321 Theater Practicum II 2-4-3
This course is a continuation of the laboratory for exploring all the elements of theater. Practical acting and production work are provided through involvement with public performance of one or more plays. Prerequisite: DRAM 1320 and department consent.

DRAM 1330 Stagecraft I 2-4-3
The study and application of visual aesthetics of design which may include the physical theater, scenery construction and painting, properties, lighting, costume, makeup, and backstage organization. Prerequisite: None.

DRAM 1342 Introduction to Costume 2-4-3
Principles and techniques of costume design and construction for theatrical productions.

DRAM 1351 Acting I 2-4-3
The development of basic skills and techniques of acting including increased sensory awareness, ensemble performing, script analysis, and mechanics of acting. Prerequisite: None.

DRAM 1352 Acting II 2-4-3
This course is designed to complement Acting I and to provide a continuum for community college students. Basic skills and techniques will be augmented by additional physical and vocal techniques. Prerequisite: DRAM 1351, or Instructor Approval.

DRAM 2336 Voice for the Theater 3-0-3
Application of the performer's use of the voice as a creative instrument of effective communication. Encourages an awareness of the need for vocal proficiency and employs techniques designed to improve the performer's speaking abilities. Prerequisite: None

DRAM 2366 Development of the Motion Picture I 2-4-3
This course focuses on the development of motion picture; analyzing visual, aural, dramatic and narrative aspects of films. A survey of historical growth and the sociological effect of film as an art is included. Prerequisite: None

DRAM 2367 Development of the Motion Picture II 2-4-3
The focus of this course could vary from semester to semester. It will follow an in-depth study of a specific element related to the motion picture art form. Some possible topics might include a focus on genre, sociological influence, technical art or directorial style. Prerequisite: None.

DS— Developmental Studies

The credit received from these courses is not transferable and cannot be applied towards degree completion.

DSED 0300 College Study Skills 3-0-3
This course is designed to provide an opportunity for students to develop, select, and use strategies necessary in becoming prepared and successful in college and life. Emphasis in this particular course will be placed on the transference of high-level study skills to practical classroom situations and include the areas of time management, effective listening and note taking, concentration, learning through media, reading, retention of information, taking examinations, creativity, and leadership.

DSMA 0101 Basic Developmental Mathematics 1-1.5-1
This course helps students prepare to pursue college-level academic work. It uses varied instructional techniques to identify deficiencies and provide a review of fundamental operations in mathematics. (Fort Hood BSEP/FAST)

DSMA 0300 Developmental Mathematics I 5-1-3
Developmental Mathematics I is designed to help the student make the transition from arithmetic to algebra. This is accomplished through in-depth coverage of the fundamentals of whole numbers, fractions, decimals, percents, sign numbers, order of operations, prime factorization, greatest common factor, variable expressions, introduction to graphs and linear equations. A computer lab where students practice math skills is required.

DSMA 0301 Developmental Mathematics II 5-1-3
Developmental Mathematics II is designed to provide instruction and practice in performing fundamental algebraic operations involving real numbers, linear equations and inequalities, system of linear equations, polynomials, factoring, graphing, and selected application problems. A computer lab where students practice math skills is required. The prerequisite for this course is DSMA 0300 or DSMA 0304 or DSMA 0305 or an appropriate placement test score.

DSMA 0303 Developmental Mathematics IV 5-1-3
Developmental Mathematics IV requires an understanding of the topics taught in DSMA 0301. This course teaches such topics as rational expressions, rational exponents and radicals, exponential and logarithmic equations, complex numbers, nonlinear inequalities, systems of nonlinear equations, quadratic equations, and functions and their graphs. This course will assist the student in developing the critical-thinking and problem-solving skills necessary for college-level mathematics courses. A computer lab where students practice math skills is required. The prerequisite for this course is DSMA 0301 or DSMA 0306 or DSMA 0309 or an appropriate placement test score.

DSMA 0304 Fundamentals of Mathematics II 3-0-3
Fundamentals of Mathematics II is designed to help the student make the transition from arithmetic to algebra. This is accomplished through in-depth coverage of the fundamentals of whole numbers, fractions, decimals, percents, sign numbers, order of operations, prime factorization, greatest common factor, variable expressions, introduction to graphs and linear equations. (Offered at locations that do not have a lab facility)

DSMA 0305 Pre-Algebra 4-0-3
This course is designed for the student who requires a flexible schedule and possesses the commitment and self-discipline to benefit from interactive on-line learning. This course includes an in-depth coverage of the fundamentals of whole numbers, fractions, decimals, percents, sign numbers, order of operations, prime factorization, greatest common factor, variable expressions, introduction to graphs and linear equations. A computer, internet connection, and designated course software to facilitate interactive learning must be available. This course is offered online.

DSMA 0306 Introductory Algebra 3-0-3
Introductory Algebra is designed to provide instruction and practice in performing fundamental algebraic operations involving real numbers, linear equations and inequalities, system of linear equations, polynomials, factoring, graphing, and selected application problems. The prerequisite for this course is DSMA 0304 or DSMA 0300 or DSMA 0305 or an appropriate placement test score. (Offered at locations that do not have a lab facility)

DSMA 0307 Intermediate Algebra 3-0-3
Intermediate Algebra requires an understanding of the topics taught in DSMA 0306. This course teaches such topics as rational expressions, rational exponents and radicals, exponential and logarithmic equations, complex numbers, nonlinear inequalities, systems of nonlinear equations, quadratic equations, and functions and their graphs. This course will assist the student in developing the critical-thinking and problem-solving skills necessary for college-level mathematics courses. The prerequisite for this course is DSMA 0306 or DSMA 0301 or DSMA 0309 or an appropriate placement test score. (Offered at locations that do not have a lab facility)

DSMA 0309 Fundamentals of Algebra 4-0-3
Fundamentals of Algebra is designed for the student who requires a flexible schedule and possesses the commitment and self-discipline to benefit from interactive on-line learning. This course provide instruction and practice in performing fundamental algebraic operations involving real numbers, linear equations and inequalities, system of linear equations, polynomials, factoring, graphing, and selected application problems. A computer, internet connection, and designated course software to facilitate interactive learning must be available. The prerequisite for this course is DSMA 0305 or DSMA 0300 or DSMA 0304 or an appropriate placement test score. This course is offered online.

DSMA 0310 Intermediate Algebra 4-0-3
Intermediate Algebra is designed for the student who requires a flexible schedule and possesses the commitment and self-discipline to benefit from interactive on-line learning. This course requires an understanding of the topics taught in DSMA 0309. This course teaches such topics as rational expressions, rational exponents and radicals, exponential and logarithmic equations, complex numbers, nonlinear inequalities, systems of nonlinear equations, quadratic equations, and functions and their graphs. This course will assist the student in developing the critical-thinking and problem-solving skills necessary for college-level mathematics courses. A computer, internet connection, and designated course software to facilitate interactive learning must be available. The prerequisite for this course is DSMA 0309 or DSMA 0301 or DSMA 0306 or an appropriate placement test score. This course is offered online.

DSRE 0300 Developmental Reading I 2-2-3
Developmental Reading I (DSRE 0300) is a fundamental reading course designed to aid students in acquiring and improving the basic skills needed for reading college-level materials. Emphasis will be on word attack skills, vocabulary development, comprehension, fluency, and study and test-taking skills. Each student is required to log 16 hours in the developmental studies computer lab to practice the reading skills addressed in class.

DSRE 0301 Developmental Reading II 2-2-3
Developmental Reading II (DSRE 0301) is designed to aid students in developing and reinforcing the skills needed for reading college-level materials. This course was developed for those who have successfully completed Developmental Reading I (DSRE 0300 or DSRE 0302). Emphasis will be on vocabulary development, literal and critical comprehension skills, study and test taking skills, and fluency. Each student is required to log 16 hours in the developmental studies computer lab to practice the reading skills addressed in class.

DSRE 0302 Fundamentals of Reading I 3-0-3
Fundamentals of Reading I (DSRE 0302) is a fundamental reading course designed to aid students in acquiring and improving the basic skills needed for reading college-level materials. Emphasis will be on word attack skills, vocabulary development, comprehension, fluency, and study and test-taking skills. (Offered at locations that do not have a lab facility)

DSRE 0303 Fundamentals of Reading II 3-0-3
Fundamentals of Reading II (DSRE 0303) is designed to aid students in developing and reinforcing the skills needed for reading college-level materials. This course was developed for those who have successfully completed Developmental Reading I (DSRE 0300 or DSRE 0302). Emphasis will be on vocabulary development, literal and critical comprehension skills, study and test taking skills, and fluency. (Offered at locations that do not have a lab facility)

DSRE 0311 Developmental Reading II 4-0-3
Developmental Reading II (DSRE 0311) is designed for the student who requires a flexible schedule and who possesses the commitment and self-discipline to benefit from interactive on-line learning. This course is designed to aid students in developing and reinforcing the skills needed for reading college-level materials. This course was developed for those who have successfully completed Developmental Reading I (DSRE 0300 or DSRE 0302). Emphasis will be on vocabulary development, literal and critical comprehension skills, study and test-taking skills, and fluency. A computer, internet connection, and designated course software to facilitate interactive learning must be available. This course is offered online.

DSWR 0301 Developmental Writing I 3-1-3
Developmental Writing I is a fundamental English course designed to aid the student in acquiring the basic skills needed for college-level writing. Primary emphasis is placed on sentence and paragraph development, with additional attention given to problems in grammar and usage as these problems occur in the paragraphs. Intended for native English speakers or for those students who have scored 550 or above on the Test of English as a Foreign Language (TOEFL). A computer lab where students practice writing skills is required.

DSWR 0302 Developmental Writing II 3-1-3
Developmental Writing II is a fundamental English course designed to aid the student in acquiring the basic skills needed for college-level writing. Primary emphasis is placed on essay development, with attention given to problems in grammar and usage as these problems occur in the essays. This is a required course for students who have scored between 50 and 79 on the ACCUPLACER and a 4 or 5 on the writing section, or for students who have successfully completed DSWR 0301. Intended for native English speakers or for those students who have scored 550 or above on the Test of English as a Foreign Language (TOEFL). A computer lab where students practice writing skills is required.

DSWR 0303 Fundamentals of Writing I 3-0-3
Fundamentals of Writing I is a fundamental English course designed to aid the student in acquiring the basic skills needed for college-level writing. Primary emphasis is placed on sentence and paragraph development, with additional attention given to problems in grammar and usage as these problems occur in the paragraphs. Intended for native English speakers or for those students who have scored 550 or above on the Test of English as a Foreign Language (TOEFL). (Offered at locations that do not have a lab facility)

DSWR 0304 Fundamentals of Writing II 3-0-3
Fundamentals of Writing II is a fundamental English course designed to aid the student in acquiring the basic skills needed for college-level writing. Primary emphasis is placed on essay development, with attention given to problems in grammar and usage as these problems occur in the essays. Intended for native English speakers or for those students who have scored 550 or above on the Test of English as a Foreign Language (TOEFL). (Offered at locations that do not have a lab facility)

DSWR 0311 Developmental Writing II 4-0-3
Developmental Writing II is designed for the student who requires a flexible schedule and possesses the commitment and self discipline to benefit from interactive on-line learning. This course's purpose is to aid students in developing and reinforcing the skills needed for college-level writing. This course emphasizes essay writing, with attention given to grammar, mechanical, and usage problems as they occur in the context of the essay intended for native English speakers or for those students who scored 550 or above on the Test of English as a Foreign Language (TOEFL). A computer, internet connection, and designated course software to facilitate interactive learning must be available. Prerequisite: A course comparable to DSWR 0301 or appropriate test scores. This course is offered online.

DS— English as a Second Language (ESL)

The credit received from these courses is not transferable and cannot be applied towards degree completion.

DSED 0302 College Study Skills for Foreign Students (ESL) 3-1-3
This elective for ESL students at levels 2 and 3 prepares students for the Test of English as a Foreign Language (TOEFL iBT), the test required for entry into most college-level institutions. Advanced reading, listening, speaking, writing, test-taking, and research techniques are taught. Prerequisites: Completion of all courses in Level 1 DSLA.

DSLA 0310 Reading and Vocabulary I (ESL) 3-2-3
This course is designed for beginning non-native speakers who need to develop basic vocabulary and reading skills such as identifying the main idea, locating details, and using word analysis to sound out new words. A laboratory is required.

DSLA 0314 Writing I (ESL) 3-2-3
This course, designed for intermediate non-native speakers, is a continuation of Grammar I. It covers grammatical structures, beginning with clauses in complex sentences. The course focuses on the development of correct simple, compound, and complex sentences; basic process paragraphs; and expository paragraphs. A laboratory is required. Prerequisite: DSLA 0315

DSLA 0315 Grammar I (ESL) 3-1-3
This course is for beginning-intermediate non-native speakers. It covers basic elements of English sentence structure and linguistic problem areas such as countable/uncountable nouns, articles, prepositions, phrasal verbs, word order, and simple sentence construction.

DSLA 0318 English for Foreign Students I (ESL) 3-2-3
This course offers an integrated approach to speaking, listening, reading, and writing. Though primarily conversational in nature, grammatical concepts, reading, and writing are covered. This course may be substituted for Listening I and Speaking I.

DSLA 0320 Reading and Vocabulary II (ESL) 3-2-3
This course, for intermediate non-native speakers, provides instruction in vocabulary, reading comprehension, structural analysis, and organizational patterns. A laboratory is required. Prerequisite: DSLA 0310.

DSLA 0321 Writing II (ESL) 3-2-3
This course is a continuation of Grammar I and Writing I. Students continue their study of grammar while learning to write narrative and persuasive paragraphs. A laboratory is required. Prerequisite: DSLA 0314.

DSLA 0322 Academic Listening and Speaking II (ESL) 3-2-3
In this course, designed for intermediate non-native speakers, students develop beginning note-taking and speaking skills to prepare them for academic environments. Prerequisites: DSLA 0316 and DSLA 0317.

DSLA 0323 Academic Listening and Speaking I 4-1-3
This course, designed for beginning non-native speakers, moves students from aural language recognition to oral production through simple conversational dialogues and the use of dictation. This course focuses on fluency and accuracy.

DSLA 0330 Reading and Vocabulary III (ESL) 3-2-3
This course is a continuation of DSLA 0320, Reading and Vocabulary II, in the Certificate Program for English-as-a-Second Language. It provides advanced vocabulary acquisition and comprehension skills through the study of short stories and informational articles. A laboratory is required.

DSLA 0332 Academic Listening and Speaking III (ESL) 3-2-3
In this course for advanced non-native speakers, students improve note taking, and oral reporting skills to prepare for college-level courses. Prerequisite: DSLA 0322.

DSLA 0340 Accent Reduction (ESL) 3-0-3
This course is designed for non-native speakers of English who, despite knowledge of English, experience difficulty in pronouncing words and phrases correctly. It consists of exercises to shape and articulate correct consonant and vowel sounds in words and phrases using English rhythm, intonation, and pitch patterns. This course will not result in accent-free speech, but it will improve the speaker's clarity and phrasing so that English speakers will more readily understand the non-native speaker. This course differs from DSLA 0316 and DSLA 0317 in that it focuses on pronunciation rather than vocabulary acquisition. Prerequisites: DSLA 0316 Listening I and DSLA 0317 Speaking I. Offered on Central Campus only.

ECON Economics

ECON 2301 Principles of Macroeconomics 3-0-3
An analysis of the economy as a whole including measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation, and unemployment. Other topics include international trade, economic growth, business cycles, and fiscal policy and monetary policy.

ECON 2302 Principles of Microeconomics 3-0-3
Analysis of the behavior of individual economic agents, including consumer behavior and demand, producer behavior and supply, price and output decisions by firms under various market structures, factor markets, market failures, and international trade.

EDUC Education see also TECA

EDUC 1301 Introduction to the Teaching Profession 3-1-3
An enriched, 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; provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations; provides students with 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; course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; and course must include a minimum of 16 contact hours of field experience in P-12 classrooms.

EDUC 2301 Introduction to Special Populations 3-1-3
An enriched, integrated pre-service course and content experience that: 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; provides students with opportunities to participate in early field observations of P-12 special populations; should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; must include a minimum of 16 contact hours of field experience in P-12 classrooms with special populations. Prerequisite: EDUC 1301.

EECT Communications Electronics
see also CETT, CPMT, CSIR, ELMT, HART, ITCC and ITNW

EECT 1474 Basic Communications Circuits 3-3-4
An introduction to communications circuits used in both the two way and broadcast medium of transmission and reception with heavy emphasis on reception. Prerequisite: CETT 1429.

EECT 1476 Digital Communications 3-3-4
A broad coverage of digital communications including telephone data communications and voice synthesis. Prerequisite: CETT 1425 and CETT 1429.

EECT 2439 Communications Circuits 3-3-4
A study of communications systems with emphasis on amplitude modulation, frequency modulation, phase modulation, and digital pulse modulation. Discussion of several types of modulators, demodulators, receivers, transmitters, and transceivers. Prerequisite: EECT 1474.

ELMT Communications Electronics
see also CETT, CPMT, CSIR, EECT, HART, ITCC and ITNW

ELMT 1301 Programmable Logic Controllers 2-4-3
An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing of equipment. Prerequisites: CETT 1425 and CETT 1429.

ELMT 1311 Solar Fundamentals 3-1-3
The study of heat transference, motors, pumps and other mechanical devices; solid state switches; photovoltaic plates and energy conversion; thermal dynamics; and solar energy.

ELMT 1402 Solar Photovoltaic Systems 3-3-4
Design and installation of solar photovoltaic systems and their applications.

ELMT 2339 Advanced Programmable Logic Controllers 2-4-3
Advanced applications of programmable logic controllers as used in industrial environments including concepts of programming, industrial applications, troubleshooting ladder logic, and interfacing of equipment. Prerequisite: ELMT 1301.

ELMT 2435 Certified Electronics Technician Training 3-3-4
Review of electronics concepts and principles in preparation for sitting for a certification examination administered by an outside organization or agency. Prerequisite: CETT 1449.

ELMT 2437 Electronic Troubleshooting, Service, and Repair 3-3-4
In-depth coverage of electronic systems, maintenance, troubleshooting, and repair. Topics include symptom identification, proper repair procedures, repair checkout, and preventive maintenance. Emphasis on safety and proper use of test equipment. May be offered as a capstone course. Prerequisites: CETT 1449.

ELPT Maintenance Technology see also CBFM, CNBT, CRPT, MBST, PFPB and WDWK

ELPT 1411 Basic Electrical Theory 3-3-4
Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.

ELPT 1429 Residential Wiring 3-3-4
Wiring methods for single family and multi-family dwellings. Includes load calculations, service entrance sizing, proper grounding techniques, and associated safety procedures. Prerequisite: ELPT 1411.

EMAP Public Administration/ Homeland Security see also HMSY

EMAP 1345 Hazard Mitigation and Debris Management 3-0-3
Hazard mitigation process and available methodologies which, when applied, will contribute to reducing the vulnerability of a jurisdiction. Includes an in-depth study of potential funding mechanisms including the Hazard Mitigation Grant Program.

EMAP 1400 Principles of Basic Emergency Management 4-0-4
Overview of the Texas Emergency Management System and the concepts of emergency management and its integration of systems, basic definitions, identification of hazards, the role of the local emergency manager, including interaction among various government entities. This course is equivalent to the Texas Department of Emergency Management and the Federal Emergency Management Agency courses G230 and G610.

EMAP 1440 Disaster Exercise Design & Evaluation4-0-4
Twelve-step process in the development of emergency management exercises, beginning with assessing a jurisdiction's exercise needs and continuing through criteria-based evaluation and after-action reporting. This course will provide students with detailed information concerning the system for command, control and coordination of emergency response. This course is equivalent to the Texas Department of Emergency Management and the Federal Management Agency course G920.

EMAP 2300 Developing Volunteer Resources and Decision Making 3-0-3
Management of volunteer services. Emphasizes decision-making, problem solving, and effective donation management planning and implementation. This course is equivalent to the Texas Department of Emergency Management and the Federal Emergency Management Agency courses G241 and G288.

EMAP 2301 Leadership and Effective Communication 3-0-3
Analysis of personal and group dynamics in an emergency management setting. Examines the interpretation of the spoken and unspoken word and the effective utilization of public information processes of print, radio, and television media. This course is equivalent to the Texas Department of Emergency Management and the Federal Emergency Management Agency courses G240 and G242.

EMAP 2302 Managing Mass Casualty and Fatality Incidents 3-0-3
Disaster scene control involving large numbers of casualties and coordination of the responding agencies. Includes observation and critique of mass casualty disaster drills and critical incident stress debriefing.

EMAP 2355 Disaster Recovery 3-0-3
Policies, concepts, and procedures of recovery. Addresses the various federal and state assistance programs. Emphasizes coordination of damage assessment, preparing documentation, and recovery procedures. This course is equivalent to the Texas Department of Emergency Management and the Federal Emergency Management Agency course G620.

EMSP Emergency Medical Technology

EMSP 1108 Emergency Vehicle Operations 0-2-1
Instruction, demonstration, and driving range practice to prepare drivers of emergency vehicles to operate their vehicles safely in the emergency and non-emergency mode.

EMSP 1147 Pediatric Advanced Life Support 1-0-1
A course in a system of protocols for management of the pediatric patient experiencing difficulties in medical and/or trauma related emergencies.

EMSP 1160 Clinical-Emergency Medical Technology/Technician 0-6-1
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 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. Upon successful completion of this course and EMSP 1401, students are eligible to take the exam to be certified as an EMT-Basic. This course is only offered with EMSP 1401.

EMSP 1166 Practicum/Field Experience-Emergency Medical Technology/Technician 0-7-1
An intermediate or advanced type of health professions work-based instruction that 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 the clinical professional, generally a clinical preceptor. A health practicum may be a paid or unpaid learning experience. Upon successful completion of this course, EMSP 1441 and EMSP 1355, students are eligible to take the exam to be certified as an EMT-I. This course is only offered with EMSP 1441 and EMSP 1355.

EMSP 1167 Practicum/Field Experience-Emergency Medical Technology/Technician 0-8-1
An intermediate or advanced type of health professions work-based instruction that 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 the clinical professional, generally a clinical preceptor. A health practicum may be a paid or unpaid learning experience. This course is designed to meet Practicum requirements for EMSP 2444 and EMSP 2434. Prerequisites: Current CPR certification. Co-requisites: EMSP 2444 and 2434. See also admission requirements.

EMSP 1204 EMT Refresher 1-2-2
Update and review theory and skills necessary to meet national and/or state requirements for remediation or recertification as an Emergency Medical Technician (EMT).

EMSP 1268 Practicum/Field Experience-Emergency Medical Technology/Technician 0-14-2
An intermediate or advanced type of health professions work-based instruction that 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 the clinical professional, generally a clinical preceptor. A health practicum may be a paid or unpaid learning experience. Upon successful completion of this course and EMSP 2143, students are eligible to take the exam to be certified as an EMT-P by the Texas Department of Health and/or National Registry of EMT. Prerequisites: Current CPR certification. Co-requisite: EMSP 2143. See also admission requirements.

EMSP 1291 Special Topics in Emergency Medical Technology/Technician 2-0-2
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.

EMSP 1305 Emergency Care Attendant 2-3-3
Basic first responder course in basic emergency medical care. Emphasis on requirements of national and state accrediting agencies.

EMSP 1338 Introduction to Advanced Practice 3-0-3
An exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital.

EMSP 1355 Trauma Management 2-3-3
A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with traumatic injuries. Upon successful completion of this course, EMSP 1441 and EMSP 1166, students are eligible to take the exam to be certified as an EMT-Intermediate. Prerequisites: Current CPR certification, EMSP 1401, EMSP 1160, or national registry certification, or any state certification as an EMT-Basic. See also admission requirements.

EMSP 1356 Patient Assessment and Airway Management 2-3-3
A detailed study of the knowledge and skills required to perform patient assessment and airway management.

EMSP 1391 Special Topics in Emergency Medical Technology/Technician 2-4-3
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. This course was designed to be repeated multiple times to improve student proficiency.

EMSP 1401 Emergency Medical Technician-Basic 2-6-4
Introduction to the level of Emergency Medical Technician (EMT) - Basic. Includes all the skills necessary to provide emergency medical care at a basic life support level with an ambulance service or other specialized services. Upon successful completion of this course and EMSP 1160, students are eligible to take the exam to be certified as an EMT-Basic by the Texas Department of Health and/or National Registry of EMT. Prerequisite: Current CPR certification. See also admission requirements.

EMSP 2135 Advanced Cardiac Life Support 1-0-1
Skill development for professional personnel practicing in critical care units, emergency departments, and paramedic ambulances. Establishes a system of protocols for management of the patient experiencing cardiac difficulties.

EMSP 2143 Assessment Based Management 0-3-1
The capstone course of the EMSP program. Designed to provide for teaching and evaluating comprehensive, assessment-based patient care management. Upon successful completion of this course and EMSP 1268, students are eligible to take the exam to be certified as an EMT-P by the Texas Department of Health and/or National Registry of EMT. Prerequisites: Current CPR certification, EMSP 2330. Co-requisite: EMSP 1268. See also admission requirements.

EMSP 2147 Pediatric Education for Pre-Hospital Providers 1-0-1
A course in a system of protocols for management of the pediatric patient experiencing difficulties in medical and/or trauma-related emergencies.

EMSP 2160 Clinical – Emergency Medical EMT Paramedic 0-3-1
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.

EMSP 2300 Methods of Teaching Emergency Medical Service 2-2-3
Instruction in teaching methodology for instructors of emergency medical services.

EMSP 2330 Special Populations 2-2-3
A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of ill or injured patients in nontraditional populations. Upon successful completion of this course, EMSP 2444, EMSP 2434, EMSP 1167, EMSP 2143 and EMSP 1268, students are eligible to take the exam to be certified as an EMT-P by the Texas Department of Health and/or National Registry of EMT. Prerequisites: Current CPR certification, EMSP 1167. See also admission requirements.

EMSP 2338 EMS Operations 3-0-3
A detailed study of the knowledge and skills necessary to reach competence to safely manage the scene of an emergency. Prerequisites: Current CPR certification, EMSP 1401. See also admission requirements.

EMSP 2434 Medical Emergencies 3-3-4
A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with medical emergencies. Upon successful completion of this course, EMSP 2444, EMSP 1167, EMSP 2330, EMSP 2143 and EMSP 1268, students will be eligible to take the exam to be certified as an EMT-P by the Texas Department of Health and/or National Registry of EMT. Prerequisites: Current CPR certification, EMSP 1401 and EMSP 1160. See also admissions requirements.

EMSP 2444 Cardiology 3-3-4
A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with cardiac emergencies. Upon successful completion of this course, EMSP 2434, EMSP 1167, EMSP 2330, EMSP 2143 and EMSP 1268, students will be eligible to take the exam to be certified as an EMT-P by the Texas Department of Health and/or National Registry of EMT. Prerequisites: Current CPR certification, EMSP 1401 and EMSP 1160. See also admission requirements.

EMSP 2458 Critical Care Paramedic 3-3-4
Prepares healthcare personnel to function as members of a critical care transport team.

ENGL English

ENGL 1301 Composition I 3-0-3
A study of the principles and techniques of written compositions including sentence structure, paragraph development, and paper organization. Also stresses the development of critical thinking as it applies to the textual analysis of expository prose. Prerequisite: Appropriate placement score or TSI exemption or completion of the appropriate level of Developmental Studies course.

ENGL 1302 Composition II 3-0-3
A continuation of ENGL 1301, emphasizing in more depth the principles and techniques of written compositions. Focus of compositions is on the development of critical thinking as it relates to the textual analysis of literary genres: the short story, poetry, drama, and the novel. Formal research paper is required. Prerequisite: ENGL 1301, or equivalent, with a grade of "C" or above.

ENGL 2307 Creative Writing I 3-0-3
This course provides practical experience in the techniques of imaginative writing. It is designed to engage students in practical criticism and contemporary trends while emphasizing the development of creative skills. Students will receive guidance and instruction in the skills and craft necessary to construct successful fiction (short stories) and poetry. Prerequisite: ENGL 1301, or equivalent, with a grade of "C" or above.

ENGL 2308 Creative Writing II 3-0-3
This course provides practical experience in the techniques of imaginative writing. The focus of this course will be genre specific. This course is designed to guide the student in completing a detailed outline of a working novel. It will expose students to constructive criticism of their own work, and develop appropriate critiquing skills to be applied to the writings of others. The course will also focus on developing skills to set and meet timelines for the completion of a large project. Prerequisite: ENGL 1301.

ENGL 2311 Technical and Business Writing 3-0-3
Study of technical, scientific, and business writing including reports, proposals, and other papers. The course also includes presentation of oral reports. Prerequisite: ENGL 1301 or equivalent, with a grade of "C" or above.

ENGL 2322 British Literature I 3-0-3
A survey of English literature from Beowulf to the major writers of the 18th Century. Although careful attention is given to the historical, social, and intellectual developments that gave rise to the literature, the emphasis of the course is on individual selections themselves as outstanding expressions of the English literary heritage. The course employs critical reading, thinking, and writing skills in the analysis of a wide variety of selected readings. Prerequisites: ENGL 1301 and 1302, or equivalent, with a grade of "C" or above.

ENGL 2323 British Literature II 3-0-3
A survey of English literature from the early Romantic writers to the Twentieth Century. Although careful attention is given to the historical, social, and intellectual developments that gave rise to the literature, the emphasis of the course is on the individual selections themselves as outstanding expressions of the English literary heritage. The course employs critical reading, thinking, and writing skills in the analysis of a wide variety of selected readings. Prerequisites: ENGL 1301 and 1302, or equivalent, with a grade of "C" or above.

ENGL 2327 American Literature I 3-0-3
A survey of American literature from selected Pre-Colonial and Colonial literature to selected major writers of the American Renaissance period. Although careful attention is given to the historical, social, and intellectual developments that gave rise to the literature, the emphasis of the course is on the individual selections themselves as outstanding expressions of our American literary heritage. The course employs critical reading, thinking, and writing skills in the analysis of a wide variety of selected readings. Prerequisites: ENGL 1301 and 1302, or equivalent, with a grade of "C" or above.

ENGL 2328 American Literature II 3-0-3
A survey of American literature beginning with Walt Whitman and ending with selected major writers from the present. Although careful attention is given to the historical, social, and intellectual developments that gave rise to the literature, the emphasis is on the individual selections themselves as outstanding expressions of our American literary heritage. The course employs critical reading, thinking, and writing skills in the analysis of a wide variety of selected readings. Prerequisites: ENGL 1301 and 1302, or equivalent, with a grade of "C" or above.

ENGL 2332 World Literature I 3-0-3
A survey of the major works of world writers from ancient epics to Renaissance poetry. Emphasis will be placed on individual selections of literature as outstanding examples of literary masterpieces and on significant themes represented across the literature. Social, intellectual and historical developments will be examined to highlight literary

development through the ages. The course employs critical reading, thinking, and writing skills in an analysis of a wide variety of selected reading. Prerequisites: ENGL 1301 and 1302, or equivalent, with a grade of "C" or above.

ENGL 2333 World Literature II 3-0-3
A survey of the major works of world writers from the Enlightenment to the Twenty-first Century. Emphasis will be placed on individual selections of literature as outstanding examples of literary masterpieces and on significant themes represented across the literature. Social, intellectual and historical developments will be examined to highlight literary development through the ages. The course employs critical reading, thinking, and writing skills in an analysis of a wide variety of selected readings. Prerequisites: ENGL 1301 and 1302, or equivalent, with a grade of "C" or above.

ENGR Engineering

ENGR 1201 Introduction to Engineering 2-0-2
Introduction to engineering as a discipline and a profession. Includes instruction in the application of mathematical and scientific principles to the solution of practical problems for the benefit of society. Prerequisite: MATH 1414 or equivalent with a grade of "C" or above.

ENGR 2301 Engineering Mechanics I – Statics 3-0-3
Calculus-based study of composition and resolution of forces, equilibrium of force systems, friction, centroids, and moments of inertia. Prerequisite: MATH 2413. Co-requisite MATH 2414.

ENGR 2302 Engineering Mechanics II – Dynamics 3-0-3
Calculus-based study of dynamics of rigid bodies, force-mass-acceleration, work-energy, and impulse-momentum computation. Prerequisite: ENGR 2301 and MATH 2414.

ENVR Environmental Science

ENVR 1401 Environmental Science I 3-3-4
General interest course requiring a minimum of previous science background and relating scientific knowledge to problems involving energy and the environment. Prerequisite: Appropriate placement score or completion of the appropriate level of Developmental Studies course. Co-requisite: ENVX 1401.

FIRT Fire Protection

FIRT 1301 Fundamentals of Fire Protection 3-0-3
Overview to fire protection, career opportunities in fire protection and related fields, philosophy and history of fire protection/service, fire loss analysis, organization and function of public and private fire protection services, fire departments as part of local governments, laws and regulations affecting the fire service, fire service nomenclature, specific fire protection functions, and basic fire chemistry and physics. Includes introduction to fire protection systems and introduction to fire strategy and tactics.

FIRT 1303 Fire and Arson Investigation I 3-0-3
In-depth study of basic fire and arson investigation practices. Emphasis on fire behavior principles related to fire cause and origin determination.

FIRT 1307 Fire Prevention Codes & Inspections 3-0-3
Study of local building and fire prevention codes. Emphasis on fire prevention inspections, practices, and procedures.

FIRT 1309 Fire Administration I 3-0-3
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.

FIRT 1315 Hazardous Materials I 3-0-3
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.

FIRT 1319 Firefighter Health and Safety 3-0-3
Study of firefighter occupational safety and health in emergency and non-emergency situations.

FIRT 1338 Fire Protection Systems 3-0-3
Design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection, and portable fire extinguishers.

FIRT 2309 Firefighting Strategies and Tactics I 3-0-3
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.

FREN French

FREN 1411 Beginning French I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

FREN 1412 Beginning French II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: FREN 1411 with a grade of "C" or above.

FREN 2311 Intermediate French I 3-0-3
This course includes grammar review, composition, and reading of French masterpieces, with conversation based on material read. Prerequisite: FREN 1411 and 1412 with a grade of "C" or above.

FREN 2312 Intermediate French II 3-0-3
This course continues reading of French masterpieces and drill on syntax as needed for reading, composition, and conversation. Prerequisite: FREN 2311 with a grade of "C" or above.

GEOG Geography

GEOG 1300 Principles of Geography 3-0-3
This is an introductory-level course that combines physical and cultural geography using a spatial approach. The course examines the physical environment of the Earth and explains maps, covers man's adaptation to environmental extremes, and explores man's use of his environment ranging from adaptation within a tribal culture to the highly modernized urban world.

GEOG 1301 Physical Geography 3-0-3
A course which examines the physical characteristics of the Earth's environment using maps as a primary tool for expressing location and interrelationships. Principle discussion topics are the atmosphere and oceans, weather, climate, environments of earth materials and vegetation, earth processes, land forms and their development.

GEOG 1302 Cultural Geography 3-0-3
Introduction to the concepts which provide a foundation for continued study of geography. Includes the different elements of natural environment as related to human activities, modes of living, and map concepts. The first semester emphasizes physical geography and the second semester emphasizes cultural geography.

GEOG 1303 World Regional Geography 3-0-3
The study of major developing and developed regions of the world stressing their similarities and differences and their physical and cultural spatial interrelationships. An additional emphasis is the diversity of ideas and practices to be found in those regions.

GEOL Geology

GEOL 1403 Physical Geology 3-3-4
An introductory course about the materials and processes of the Earth. Topics included are: minerals, rocks, plate tectonics, continental evolution, earthquakes, seismology, volcanoes, weathering, running water, ground water, mass wasting, and others. The study of regional rocks and minerals and the opportunity for field observation and collection are provided. Co-requisite: GEOX 1403.

GEOL 1404 Historical Geology 3-3-4
The course involves a study of the record of life forms that have developed throughout geological time. It also covers the development of the Earth from its cosmic beginning to current land forms. Principles of stratigraphy, sedimentary processes, paleontology, geologic time, plate tectonics, and hypotheses of the Earth's origin are studied in the course. The study of local and regional fossil fauna and the opportunity for field observation and collection of rocks and the fossils are provided. Co-requisite: GEOX 1404.

GEOL 1405 Environmental Geology 3-2-4
An interdisciplinary course which includes an overview of Earth materials and processes, which then goes on to focus upon specific geologic problems and possible solutions. A major emphasis of this course is that of the relationship of geology with other academic and practical matters and studies.

GERM German

GERM 1411 Beginning German I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

GERM 1412 Beginning German II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: GERM 1411 with a grade of "C" or above.

GERM 2311 Intermediate German I 3-0-3
This course includes grammar review, composition and practice in conversation, with readings in contemporary German writings. Includes short stories and some longer works, providing a conversational basis. Prerequisite: GERM 1411 and 1412 with a grade of "C" or above.

GERM 2312 Intermediate German II 3-0-3
This course continues reading in contemporary German writings and drill on syntax as needed for reading, composition, and conversation. Prerequisite: GERM 2311 with a grade of "C" or above.

GOVT Government

GOVT 2304 Introduction to Political Science 3-0-3
Introductory survey of the discipline of political science focusing on the scope, and methods of the field, and the substantive topics in the discipline including the theoretical foundations of politics, political interaction, political institutions and how political systems function.

GOVT 2305 Federal Government 3-0-3
Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive, and judicial branches, federalism, political participation, the national election process, public policy, civil liberties and civil rights.

GOVT 2306 Texas Government 3-0-3
Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy, and the political culture of Texas.

GRPH Graphics and Printing Technology see also ARTC

GRPH 1309 Press Operations I 2-4-3
Introduction to offset printing. Includes knowledge and skills for operating a small offset press. Emphasizes parts of the press and operation procedures, printing terminology, paper and inks, and cleanup. Prerequisite: GRPH 1405.

GRPH 1374 Press Operations III 2-4-3
Covers the press transport system, preparation of water and ink system and end of press run activities to include clean up of Hamada 234 press. Prerequisite: GRPH 2338.

GRPH 1405 Introduction to Graphic Arts and Printing 3-3-4
A study of the graphic and print industry, including the history of printing and techniques involved in the production and distribution of printed materials, printing terminology, and identification of career opportunities.

GRPH 1419 Bindery and Finishing Operations 3-3-4
An overview of bindery and finishing equipment and techniques. Emphasis on parts and operation. Demonstration of sorting, folding, cutting, labeling, wrapping, packaging, and binding methods. Prerequisites: GRPH 1374 or ARTC 2333.

GRPH 1474 Preventive Maintenance 3-3-4
This course covers preventive maintenance of the offset printing press. A thorough study of the adjustments, preventive maintenance and simple repair on darkroom, composing room, press room, and bindery equipment. Prerequisites: GRPH 2436.

GRPH 2338 Press Operations II 2-4-3
Maintenance and operation of large sheet-fed offset press systems and production of process-color jobs with hairline registration. Prerequisite: GRPH 1309.

GRPH 2436 Prepress Techniques 2-6-4
Hands-on experience in both electronic file imaging and/or traditional graphics camera use. Electronic file output and troubleshooting, graphics camera knowledge, traditional film assembly, and proofing process. High-end color scanning. Prerequisite: ARTC 2305.

GRPH 2488 Internship - Graphics & Printing Equipment Operator, General Production 0-19-4
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 employer. Prerequisite: Department approval required.

HALT Agriculture see also AGCR, AGEQ, AGMG and AGAH

HALT 1319 Landscape Construction 2-3-3
Exploration of landscape construction materials and the methods used for installation. Topics on soil preparation, including wood, concrete, and masonry construction; and landscape lighting, including pools, spas, and general construction details.

HALT 1322 Landscape Design 2-3-3
A study of the principles and elements of landscape design. Topics include client interview, site analysis, plan view, scale, plant selection, basic drawing and drafting skills, and plan preparation.

HALT 1324 Turf Grass Science and Management 2-3-3
Coverage of various species of warm and cool season grasses including their uses, application, adaptability, environmental tolerances, anatomy, and physiological responses.

HALT 1338 Irrigation Water Management and Conservation 2-3-3
Application of the science of soil-water plant relations and climatic conditions to develop effective scheduling and management of irrigation water systems for residential, commercial, industrial, park, and golf courses. Water conservation issues, water policies and codes and other related matters will be discussed.

HALT 1345 Golf/Sports Field/Park Management 2-3-3
Instruction in the management of golf courses, sports fields, and municipal parks departments. Topics include record keeping, budgeting, labor management, maintenance programs, financial reports, personnel management, and business functions.

HALT 1470 Horticulture – Home Gardening 2-4-4
This course provides the student with the fundamental skills necessary for planting and maintaining vegetable gardens crops, from both a home gardening and a commercial level of production. Specific topics include studies of soils, fertilizer, water requirements, container gardening, hydroponics gardening, pest control, composting, and plant propagation.

HALT 2308 Greenhouse Management 2-3-3
Fundamentals of greenhouse construction and operation. Topics include architectural styles, construction materials, environmental systems and controls, growing media, fertilizers, post harvest handling, marketing, and business management.

HAMG Hospitality Management see also CHEF, IFWA, PSTR, RSTO and TRVM

HAMG 1313 Front Office Procedures 3-0-3
A study of the flow of activities and functions in today's lodging operation. Topics include a comparison of manual, machine-assisted, and computer-based methods for each front file function.

HAMG 1321 Introduction to the Hospitality Industry 3-0-3
Introduction to the Hospitality Industry introduces students to the various elements of the Hospitality field. It provides an in-depth overview of the world's largest and fastest growing business. Topics include growth, development and organization of the foodservice and lodging industries; human resources; marketing; security, engineering and maintenance of hospitality facilities; and career opportunities within the hospitality industry.

HAMG 1324 Hospitality Human Resource Management 3-0-3
A study of the principles and procedures of managing people in the hospitality workplace. American Hotel and Lodging Association (AH&LA) certification course. Student must attain a score of 70% or higher on certification test to receive National Certification.

HAMG 1340 Hospitality Legal Issues 3-0-3
A course in legal and regulatory requirements that impact the hospitality industry. Topics include Occupational Safety and Health Administration (OSHA), labor regulations, tax laws, tip reporting, franchise regulations, and product liability laws.

HAMG 1342 Guest Room Maintenance 3-1-3
Demonstrates the working relationship in the lodging industry between housekeeping and maintenance. American Hotel and Lodging Association (AH&LA) certification course. Student must attain a score of 70% or higher on certification test to receive National Certification.

HAMG 2301 Principles of Food and Beverage Operations 3-0-3
An introduction to food, beverage, and labor cost controls with an overview of the hospitality industry from procurement to marketing. Examination of cost components including forecasting, menu planning and pricing, logistical support, production, purchasing, and quality assurance.

HAMG 2307 Hospitality Marketing and Sales 3-0-3
Identification of the core principles of marketing and their impact on the hospitality industry.

HAMG 2332 Hospitality Financial Management 3-0-3
Methods and application of financial management within the hospitality industry. Primary emphasis on sales accountability, internal controls, and report analysis.

HAMG 2337 Hospitality Facilities Management 3-0-3
Identification of building systems, facilities management, security and safety procedures. American Hotel and Lodging Association (AH&LA) certification course. Student must attain a score of 70% or higher on certification test to receive National Certification.

HAMG 2372 Hospitality Industry Training 3-0-3
This course provides a thorough look at training by addressing how to assess and analyze the training needs of new and established operations; design, implement, and evaluate training programs for non-management employees; manage the basic training functions; and train the trainer programs.

HAMG 2388 Internship - Hospitality Administration and Management 0-17-3
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. Prerequisite: Consent of the Program Director.

HART Heating, Air Conditioning and Refrigeration

HART 1401 Basic Electricity for HVAC 3-3-4
Principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation. Prerequisite: department consent required.

HART 1403 Air Conditioning Control Principles 3-3-4
A basic study of HVAC and refrigeration controls; troubleshooting of control components; emphasis on use of wiring diagrams to analyze high and low voltage circuits; a review of Ohm's law as applied to air conditioning controls and circuits. Prerequisite: HART 1401.

HART 1407 Refrigeration Principles 3-3-4
An introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigerant handling, refrigeration components and safety. Prerequisite: Department consent required.

HART 1441 Residential Air Conditioning 3-3-4
A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems. Prerequisite or Co-requisite: HART 1401 and 1407.

HART 1445 Gas and Electric Heating 3-3-4
Study of the procedures and principles used in servicing heating systems including gas fired furnaces and electric heating systems. Prerequisite: Department consent required.

HART 2431 Advanced Electricity for HVAC 3-3-4
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 application of solid state devices. Prerequisites: HART 1401 and HART 1403.

HART 2436 Air Conditioning Troubleshooting 3-3-4
An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests. Prerequisites: HART 1401, 1403, 1407, 1445.

HART 2438 Air Conditioning Installation and Startup 3-3-4
A study of air conditioning system installation, refrigerant piping, condensate disposal, and air cleaning equipment with emphasis on startup and performance testing. Prerequisite or co-requisite: HART 1407.

HART 2441 Commercial Air Conditioning 3-3-4
A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less. Prerequisites: HART 1401, HART 1407, HART 1441.

HART 2442 Commercial Refrigeration 3-3-4
Theory and practical application in the maintenance of commercial refrigeration; medium and low temperature applications and ice machines. Prerequisites: HART 1401 and HART 1407.

HART 2445 Residential Air Conditioning System Design 3-3-4
Study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection and balancing the air system. Prerequisite: HART 1407.

HART 2449 Heat Pumps 3-3-4
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, HART 1403, HART 1407, and HART 1441.

HART 2488 Internship - Heating, A/C, Ventilation and Refrigeration Maintenance Technology/ Technician (HAC, HACR) 0-19-4
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 employer. Prerequisite: Department approval required.

HIND Hindi

HIND 1411 Beginning Hindi I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

HIND 1412 Beginning Hindi II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: HIND 1411 with a grade of "C" or above.

HIND 2311 Intermediate Hindi I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisite: HIND 1411 and 1412 with a grade of "C" or above.

HIND 2312 Intermediate Hindi II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: HIND 2311 with a grade of "C" or above.

HIST History

HIST 1301 United States History I 3-0-3
A survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. United States History I includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism, and the Civil War/Reconstruction eras. Themes that may be addressed in United States History I include: American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration, and creation of the federal government.

HIST 1302 United States History II 3-0-3
A survey of the social, political, economic, cultural, and intellectual history of the United States from the Civil War/ Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, Cold War and post-Cold War eras. Themes that may be addressed in United States History II include: American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government, and the study of U.S. foreign policy.

HIST 2301 Texas History 3-0-3
A survey of the political, social, economic, cultural, and intellectual history of Texas from the pre-Columbian era to the present. Themes that may be addressed in Texas History include: Spanish colonization and Spanish Texas; Mexican Texas; the Republic of Texas; statehood and secession; oil, industrialization, and urbanization; civil rights; and modern Texas.

HIST 2311 Western Civilization I 3-0-3
A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from human origins to the 17th century. Themes that should be addressed in Western Civilization I include the cultural legacies of Mesopotamia, Egypt, Greece, Rome, Byzantium, Islamic civilizations, and Europe through the Middle Ages, Renaissance, and Reformations.

HIST 2312 Western Civilization II 3-0-3
A survey of the social, political, economic, cultural, religious, and intellectual history of Europe and the Mediterranean world from the 17th century to the modern era. Themes that should be addressed in Western Civilization II include absolutism and constitutionalism, growth of nation states, the Enlightenment, revolutions, classical liberalism, industrialization, imperialism, global conflict, the Cold War, and globalism.

HIST 2381 African-American History 3-0-3
Historical, economic, social, and cultural development of minority groups. May include African-American, Mexican American, Asian American, and Native American issues.

HITT Office Technology see also MDCA, MRMT, POFI, POFM, and POFT

HITT 1249 Pharmacology 1-3-2
Overview of the basic concepts of the pharmacological treatment of various diseases affecting major body systems. Recommended prerequisites: HITT 1305 or MDCA 1409.

HITT 1301 Health Data Content and Structure 2-4-3
Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information including content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms and screens.

HITT 1303 Medical Terminology II 2-4-3
A continuation of the study of medical terms through word origin and structure. Introduction to abbreviations and symbols, surgical and diagnostic procedures, and medical specialties. Prerequisite: HITT 1305 or equivalent.

HITT 1305 Medical Terminology I 2-4-3
Study of medical terms through word origin and structure. Introduction to abbreviations and symbols, surgical and diagnostic procedures, and medical specialties.

HITT 1341 Coding and Classification Systems 2-4-3
Fundamentals of coding rules, conventions, and guidelines using clinical classification systems. Prerequisites: HITT 1301 and HITT 1305.

HITT 2166 Practicum 0-8-1
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisites: Completion of all courses in the certificate except HITT 2346 and Departmental approval. HITT 2346 may be taken as a co-requisite with HITT 2166.

HITT 2335 Coding and Reimbursement Methodologies 2-4-3
Advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding prospective payment systems and methods of reimbursement. Prerequisites: HITT 1341 and 1303.

HITT 2346 Advanced Medical Coding 2-4-3
Advanced concepts of ICD and CPT coding rules, conventions, and guidelines in complex case studies. Investigation of government regulations and changes in health care reporting. Prerequisites: POFM 1327, POFM 2310 and Departmental approval.

HMSY Public Administration/ Homeland Security see also EMAP

HMSY 1337 Introduction to Homeland Security 3-0-3
Overview of homeland security. Evaluation of the progression of homeland security issues throughout Texas and the United States. An examination of the roles undertaken and methods used by governmental agencies and individuals to respond to those issues.

HMSY 1338 Homeland Security Emergency Communications Management 3-0-3
A study of public safety communication system interactions. Topics include political and policy basis of emergency management, technology, mitigation, and disaster recovery. Includes an overview of incident command systems, emergency management, mitigation for emergency managers, and individual and community disaster education.

HMSY 1339 Homeland Security Emergency Contingency Planning 3-0-3
Procedures for developing, implementing, and updating an Emergency Contingency Plan that outlines public agencies and private industry response, recovery, and mitigation. Includes types of aid available to individuals and communities after a disaster. Also covers interagency and intergovernmental emergency preparedness, planning, training, and exercises are included.

HMSY 1340 Homeland Security Intelligence Operations 3-0-3
A study of the intelligence community. Includes the role of intelligence and law enforcement. Topics include collection methods, cycle, management of operations, classification, production and analysis, assessment of targets, and assessment of threat vulnerability. Source development will be conducted.

HMSY 1341 Critical Infrastructure Protection 3-0-3
Identification and analysis of critical infrastructure systems including security and threat assessments. Includes mitigation of threats as well as evaluation and revision of security measures in order to protect critical infrastructures.

HMSY 1342 Understanding and Combating Terrorism 3-0-3
Study of terrorism and reasons why America is a terrorist target. Includes methods of combating domestic and international terrorism, terrorist operations, cyber-terrorism, narco-terrorism, the mind of the terrorist, and organized crime's impact on terrorism.

HMSY 1343 Weapons of Mass Destruction 3-0-3
This course covers hazard and risk assessment, crime scene preservation, chemical agents, biological agents, radiological agents, explosive devices, detection-sampling and plume models, and personal protection methods. The critical role of first responders in weapons of mass destruction, mitigation, and survival will also be presented. Discussion will include historical events related to the use of weapons of mass destruction.

HMSY 1370 Information Technology Security for Homeland Security Specialists 3-0-3
This course covers the basics of information technology security. Topics covered are: the uses of cyber crime by terrorist organizations and their impact on our nation's information-based infrastructure, government, corporate, and private institutions and citizens; how to protect data and infrastructure from cyber crimes and electronic terrorism. Desktop computer, organizational infrastructure, communications infrastructure, and network security will also be covered. The course includes a study of the uses of computer forensics and methods to defend against cyber attacks. It will examine applications with proven success and tie them to real-life scenarios.

HMSY 1371 Counter Terrorism 3-0-3
This course will provide students with a broad understanding of the basic structure, roles and missions of the counterterrorism community in homeland security. The course will examine the definition of terrorism by investigating what motivates individuals to commit acts of terrorism, the political, legal, and policy measures that must be in place to execute counterterrorism measures, the rules of engagement in counterterrorism that affects commanders and policy makers, the role of both the legislature and courts regarding counterterrorism, the role of state sponsored terrorism and how the media influences counterterrorism operations and the implications of counterterrorism on homeland security and policies for the United States.

HMSY 1470 Final Project in Homeland Security and Emergency Management 4-0-4
Students will participate in a comprehensive project from conception to conclusion. The student will be required to plan and develop a project consisting of research, design, and layout. A formal written report and a demonstration and presentation of the process and results are required. Prerequisite: Department approval required.

HMSY 2337 Managing a Unified Incident Command 3-0-3
A study of the common set of procedures of the unified incident command system for organizing personnel, facilities, equipment, and communications to successfully coordinate multi-agency response. Includes the identification and application of key roles and functional responsibilities for professionally managing multi-agency incidents. Also covers one or more practical application exercises and/or scenarios.

HMSY 2476 Internship- Homeland Security and Emergency Management 0-12-4
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. Prerequisite: Department approval required.

HRPO Business Administration and Management see also BMGT, BUSG and MRKG

HRPO 1311 Human Relations 3-0-3
Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment.

HRPO 2301 Human Resources Management 3-0-3
Behavioral and legal approaches to the management of human resources in organizations.

HUMA Humanities

HUMA 1315 Fine Arts Appreciation 3-0-3
This is an introductory course designed to give the student a fundamental understanding and appreciation of diverse modes of expression through the visual arts, within the context of Fine and Applied Arts. Prerequisite: None

IFWA Hospitality Management see also CHEF, HAMG, PSTR, RSTO and TRVM

IFWA 1318 Nutrition for the Food Service Professional 3-0-3
An introduction to nutrition including nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques.

IMED Computer Science see also ITNW, ITSC, ITSE, ITSW and ITSY

IMED 1416 Web Design I 3-3-4
Instruction in web page design and related graphic design issues including mark-up languages, web sites, and browsers.

IMED 2409 Internet Commerce 3-3-4
An overview of the Internet as a marketing and sales tool with emphasis on developing a prototype for electronic commerce. Topics include database technology, creating websites in order to collect information, perform online transactions and generate dynamic content. Prerequisite: ITNW 1437, or ITSC 1409, or BCIS 1405.

INDO Indonesian

INDO 1411 Beginning Indonesian I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

INDO 1412 Beginning Indonesian II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: INDO 1411 with a grade of "C" or above.

INDO 2311 Intermediate Indonesian I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisite: INDO 1411 and 1412 with a grade of "C" or above.

INDO 2312 Intermediate Indonesian II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: INDO 2311 with a grade of "C" or above.

ITAL Italian

ITAL 1311 Beginning Italian I 3-0-3
This course is designed to help learners build proficiency in Italian and appreciation for the Italian language. It will also help students to develop an understanding of the Italian culture while providing contexts that reinforce the usefulness of the Italian language while living and traveling in Italy. This course is only available, under contract, to the Navy Pace Campus.

ITAL 1312 Beginning Italian II 3-0-3
This course is a continuation of ITAL 1311, Beginning Italian I. This course will build upon skills developed in Beginning Italian I, with continued emphasis on understanding Italian culture. Prerequisite: ITAL 1311. This course is only available, under contract, to the Navy Pace Campus.

ITAL 1411 Beginning Italian I 4-2-4
This course includes basic grammar drill, simple reading, and conversation.

ITAL 1412 Beginning Italian II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: ITAL 1411 with a grade of "C" or above.

ITAL 2311 Intermediate Italian I 3-0-3
This course includes grammar review, composition, and reading of Italian masterpieces, with conversation based on material read. Prerequisite: ITAL 1411 and ITAL 1412 with a grade of "C" or above.

ITAL 2312 Intermediate Italian II 3-0-3
This course continues reading of Italian masterpieces and drill on syntax as needed for reading composition and conversation. Prerequisite: ITAL 2311 with a grade of "C" or above.

ITCC Electronics see also CETT, CPMT, CSIR, EECT, ELMT, HART and ITNW

ITCC 1401 Exploration - Network Fundamentals 3-3-4
A course introducing the architecture, structure, functions, components, and models of the internet. 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. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes.

ITCC 1404 Cisco Exploration 2 – Routing Protocols and Concepts 3-3-4
This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes. Prerequisite: ITCC 1401.

ITCC 2408 Cisco Exploration 3 – LAN Switching and Wireless 3-3-4
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. Detailed explanations of LAN switch operations, VLAN implementation, Rapid Spanning Tree Protocol (RSTP), VLAN Trunking Protocol (VTP), Inter-VLAN routing, and wireless network operations. Analyze, configure, verify, and troubleshoot VLANs, RSTP, VTP, and wireless networks. Campus network design and Layer 3 switching concepts are introduced. Prerequisite: ITCC 1404.

ITCC 2410 Cisco Exploration 4 – Accessing the WAN 3-3-4
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. Describes user access technologies and devices and discover how to implement and configure Point-to-Point Protocol (PPP), Point-to-Point Protocol over Ethernet (PPPoE), DSL, and Frame Relay. WAN security concepts, tunneling, and VPN basics are introduced. Discuss the special network services required by converged applications and an introduction to quality of service (QoS). Prerequisite: ITCC 2408.

ITCC 2441 CCNA Security 3-3-4
Overall security processes with particular emphasis on hands-on skills in the following areas: security policy design and management; security technologies, products, and solutions; and secure router design, installation, configuration, and maintenance; AAA and VPN implementation using routers and firewalls.

ITCC 2459 Advanced Voice Over Internet Protocol (VOIP) 3-3-4
Voice Over Internet Protocol (VOIP) architecture, components, and functionality. Includes VOIP signaling, call control, voice dial plans, configuring voice interfaces, dial peers, and quality of service (QoS) technologies. Prerequisite: Department approval required.

ITNW Computer Science see also IMED, ITSC, ITSE, ITSW and ITSY

ITNW 1416 Network Administration 3-3-4
An introduction to Network administration as applied to Microsoft Server 2008. Topics include the role of directory services; access to network services, configuring file and print services; IP address and name resolution and services. This course prepares the individual to take the Microsoft MCTS 70-642 exam leading to certification for Microsoft Server 2008.

ITNW 1437 Introduction to the Internet 3-3-4
Introduction to the Internet with emphasis on using the World Wide Web to locate, transfer, publish information, and create web pages in HTML; creating simple web pages using internet and DHTML. Survey of emerging technologies on the Internet. Prerequisite: None.

ITNW 1454 Implementing and Supporting Servers 3-3-4
Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment. Emphasis will be on the MS Windows Server environment. Presents information needed to prepare for and take the Microsoft Exam MC-PRO 70-646. Prerequisite: None.

ITNW 1458 Network+ (CompTIA) 3-3-4
Presents information needed to prepare for and take the Computing Technology Industry Association (CompTIA) Network+ certification exam and for a career as a network professional. Prerequisite: None.

ITNW 2454 Internet/Intranet Server 3-3-4
Designing, installing, configuring, maintaining, and managing an Internet/Intranet server. Configure Domain Name System (DNS), configure Active Directory. This course prepares the individual to take the Microsoft MCTS 70-640 exam leading to certification for Microsoft Server 2008.

ITNW Electronics see also CETT, CPMT, CSIR, EECT, ELMT, HART and ITCC

ITNW 1313 Computer Virtualization 2-4-3
Implement and support virtualization of clients of servers in a networked computing environment. This course explores installation, configuration, and management of computer virtualization workstation and servers.

ITNW 1451 Fundamentals of Wireless LANs 3-3-4
Designing, planning, implementing, operating, and troubleshooting wireless LANs (WLANs). Includes WLAN design, installation, and configuration; and WLAN security issues and vendor interoperability strategies. Prerequisite: Department approval.

ITSC Computer Science see also IMED, ITNW, ITSE, ITSW and ITSY

ITSC 1301 Introduction to Computers 3-1-3
Overview of computer information systems. Introduces computer hardware, software, procedures, and human resources. Prerequisite: None

ITSC 1405 Introduction to PC Operating Systems 3-3-4
An introduction to personal computer operating systems including installation and configuration, file management, memory and storage management, control of peripheral devices, and use of utilities.

ITSC 1409 Integrated Software Applications I 3-3-4
Introduction to business productivity software suites using word processing, spreadsheets, databases, and/or presentation software. Prerequisite: None

ITSC 1415 Project Management Software 3-3-4
Use of project management software for developing a project plan including timelines, milestones, scheduling, life cycle phases, management frameworks, skills, processes, and tools. Prerequisites: 4 hours of computer science courses.

ITSC 1425 Personal Computer Hardware (CompTIA A+) 3-3-4
Current personal computer hardware including assembly, upgrading, setup, configuration, and troubleshooting. Prerequisite: None

ITSC 2439 Personal Computer Help Desk Support 3-3-4
Diagnosis and solution of user hardware and software related problems with on-the-job and/or simulated projects. Prerequisite: 12 semester hours of computer science courses.

ITSC 2486 Internship - Computer and Information Sciences, General 0-19-4
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. Prerequisites: 24 hours in computer science courses and consent of the Department Chair.

ITSE Computer Science see also IMED, ITNW, ITSC, ITSW and ITSY

ITSE 1402 Comp. Programming (Visual Basic) 3-3-4
Introduction to computer programming including design, development, testing, implementation, and documentation. Prerequisite: None.

ITSE 2402 Intermediate Web Programming (PHP/Scripting/Mobile Apps) 3-3-4
Techniques for Web development. Includes server-side and client-side scripting. Prerequisite: IMED 1416.

ITSE 2421 Object-Oriented Programming (C++) 3-3-4
Introduction to object-oriented programming. Emphasis on the fundamentals of design with classes, including development, testing, implementation, and documentation. Prerequisite: ITSE 1402.

ITSE 2459 Advanced Comp. Programming (C#) 3-3-4
Advanced programming techniques including file access methods, data structures, modular programming, program testing and documentation. Prerequisite: ITSE 1402.

ITSE 2486 Internship - Computer Programming/ Programmer, General 0-19-4
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. Prerequisites: 24 hours in computer science courses and consent of the Department Chair.

ITSW Computer Science see also IMED, ITNW, ITSC, ITSE and ITSY

ITSW 1401 Introduction to Word Processing 3-3-4
An overview of the production of documents, tables, and graphics. Prerequisites: none.

ITSW 1404 Introduction to Spreadsheets 3-3-4
Instruction in the concepts, procedures, and application of electronic spreadsheets. Prerequisites: none.

ITSW 1407 Introduction to Database 3-3-4
Introduction to database theory and the practical applications of a database. Prerequisites: ITSW 1401 OR ITSW 1404 OR ITSC 1409, OR BCIS 1405.

ITSW 2486 Internship - Data Processing and Data Processing Technology/Technician 0-19-4
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. Prerequisites: 24 hours in computer science courses and consent of the Department Chair.

ITSY Computer Science see also IMED, ITNW, ITSC, ITSE and ITSW

ITSY 1400 Fundamentals of Information Security 3-3-4
An introduction to information security including vocabulary and terminology, ethics, the legal environment, and risk management. Identification of exposures and vulnerabilities and appropriate countermeasures are addressed. The importance of appropriate planning, policies and controls is also discussed. Prerequisite: None

ITSY 1442 Information Technology Security (CompTIA) 3-3-4
Instruction in security for network hardware, software, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses. Presents information needed to prepare and take the Computer Technology Industry Association (CompTIA) Security+ Certification Exam. Prerequisite: None.

ITSY 2401 Firewalls and Network Security 3-3-4
Identify elements of firewall design, types of security threats and responses to security attacks. Understand how to design, implement, and monitor a network security plan. Examine security incident postmortem reporting and ongoing network security activities. Prerequisites: ITSY 1400 or concurrent enrollment.

ITSY 2442 Incident Response & Handling 3-3-4
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. Prerequisite: ITSY 1400 or concurrent enrollment.

ITSY 2459 Security Assessment and Auditing 3-3-4
Capstone experience for the security curriculum. 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. Prerequisite: ITSY 1400.

JAPN Japanese

JAPN 1311 Beginning Japanese I 3-0-3
Introduction to Japanese with emphasis on conversation, grammar, and the written forms. There will also be readings of simple texts dealing with Japanese life and culture.

JAPN 1312 Beginning Japanese II 3-0-3
Continuation of Japanese conversation, grammar and the written forms. Emphasis is on reading texts dealing with Japanese life and culture. Prerequisite: JAPN 1311 with a grade of "C" or above.

JAPN 1411 Beginning Japanese I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

JAPN 1412 Beginning Japanese II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: JAPN 1411 with a grade of "C" or above.

JAPN 2311 Intermediate Japanese I 3-0-3
Review and application of skills in listening, comprehension, and speaking; introduction to advanced grammar patterns; and acquisition of additional Japanese characters. Prerequisite JAPN 1411 and 1412 with a grade of "C" or above.

JAPN 2312 Intermediate Japanese II 3-0-3
This course continues reading in contemporary Japanese writings and drill on syntax as needed for reading, composition, and conversation. Prerequisite: JAPN 2311 with a grade of "C" or above.

KINE Kinesiology

Course		Title	Prerequisite	Credit
KINE	1100	Aerobics I	None	0-3-1
KINE	1101	Aerobics II	KINE 1100	0-3-1
KINE	1102	Badminton I	None	0-3-1
KINE	1103	Badminton II	KINE 1102	0-3-1
KINE	1104	Ballet I	None	0-3-1
KINE	1105	Ballet II	KINE 1104	0-3-1
KINE	1106	Basketball I	None	0-3-1
KINE	1107	Basketball II	KINE 1106	0-3-1
KINE	1108	Bowling I	None	0-3-1
KINE	1109	Bowling II	KINE 1108	0-3-1
KINE	1110	Fitness Walking I	None	0-3-1
KINE	1111	Fitness Walking II	KINE 1110	0-3-1
KINE	1112	Golf I	None	0-3-1
KINE	1113	Golf II	KINE 1112	0-3-1
KINE	1114	Spin Bike I	None	0-3-1
KINE	1115	Spin Bike II	KINE 1114	0-3-1
KINE	1116	Jazz Dance I	None	0-3-1
KINE	1117	Jazz Dance II	KINE 1116	0-3-1
KINE	1118	Jujutsu I	None	0-3-1
KINE	1119	Jujutsu II	KINE 1118	0-3-1
KINE	1120	Karate I	None	0-3-1
KINE	1121	Karate II	KINE 1120	0-3-1
KINE	1122	Kickboxing/Aerobics I	None	0-3-1
KINE	1123	Muay Thai Kickboxing I	None	0-3-1
KINE	1124	Muay Thai Kickboxing II	KINE 1123	0-3-1
KINE	1125	Physical Conditioning I	None	0-3-1
KINE	1126	Physical Conditioning II	KINE 1125	0-3-1
KINE	1127	Soccer I	None	0-3-1
KINE	1128	Soccer II	KINE 1127	0-3-1
KINE	1129	Softball I	None	0-3-1
KINE	1130	Softball II	KINE 1129	0-3-1
KINE	1131	Barbell Training/Fitness I	None	0-3-1
KINE	1132	Swimming I	None	0-3-1
KINE	1133	Swimming II	KINE 1132	0-3-1
KINE	1134	Swimming III	KINE 1133	0-3-1
KINE	1135	Tennis I	None	0-3-1
KINE	1136	Tennis II	KINE 1135	0-3-1
KINE	1137	Volleyball I	None	0-3-1
KINE	1138	Volleyball II	KINE 1137	0-3-1
KINE	1139	Water Aerobics I	None	0-3-1
KINE	1140	Water Aerobics II	KINE 1139	0-3-1
KINE	1141	Water Safety I	Demonstrated Swimming Skills	0-3-1
KINE	1142	Water Safety II	KINE 1141	0-3-1
KINE	1143	Weight Training I	None	0-3-1
KINE	1144	Weight Training II	KINE 1143	0-3-1
KINE	1145	Weight Training III	KINE 1144	0-3-1
KINE	1146	Yoga I	None	0-3-1
KINE	1147	Yoga II	KINE 1146	0-3-1
KINE	1148	Kickboxing/Aerobics II	KINE 1122	0-3-1
KINE	1149	Jogging I	None	0-3-1
KINE	1150	Jogging II	KINE 1149	0-3-1
KINE	1151	Scuba Diving I	None	0-3-1
KINE	1152	Scuba Diving II	KINE 1151	0-3-1
KINE	1153	Lifeguard Training	Demonstrated Swimming Skills	0-3-1
KINE	1154	Pilates I	None	0-3-1
KINE	1155	Pilates II	KINE 1154	0-3-1
KINE	2100	Zoomba Cardio	None	0-3-1
KINE	2101	Aquatic Zoomba I	None	0-3-1
KINE	2102	Aquatic Zoomba II	KINE 2101	0-3-1
KINE	2103	Recreational Activities	None	0-3-1
KINE	2104	Zoomba Cardio II	KINE 2100	0-3-1
KINE	2132	Barbell Training/Fitness II	KINE 1131	0-3-1
KINE	2150	Scuba III Rescue Divers	KINE 1152	0-3-1

KINE 1301 Introduction to Physical Fitness & Sport 3-0-3
A course which introduces the student to the fields of health, physical education, and recreation. Emphasis on the scope and organization of professional activities, opportunities and qualifications of the professional physical educator. This course does not replace the physical activity course(s) requirement for the award of the Associate of Arts, Associate of Science, Associate of Applied Science, Associate of General Studies nor the Associate of Applied Science of Applied Technology degrees. Prerequisite: None.

KINE 1304 Personal/Community Health I 3-0-3
Investigation of the principles and practices in relation to personal and community health. This course does not replace the physical activity course(s) requirement for the award of the Associate of Arts, Associate of Science, Associate of Applied Science, Associate of General Studies nor the Associate of Applied Science of Applied Technology degrees. Prerequisite: None.

KINE 1306 First Aid 3-0-3
First aid topics include how to assess and act in the event of injuries (including cuts, burns, joint injuries, and temperature-related illnesses). Splinting and bandaging techniques are covered. CPR topics include how to recognize an emergency, caring for conscious and unconscious choking victims, recognizing signs of a heart attack, rescue breathing, and cardiopulmonary resuscitation, and provides an introduction to Automatic External Defibrillation. American Red Cross certification in Standard First Aid Responding to an Emergency as well as Adult/Child/Infant CPR, and CPR for the Professional certifications may be earned. An additional fee will be charged in this course for Red Cross books and supplies. This course does not replace the physical activity course(s) requirement for the award of the Associate of Arts, Associate of Science, Associate of Applied Science, Associate of General Studies nor the Associate of Applied Science of Applied Technology degrees. Prerequisite: None.

KINE 1308 Sports Officiating I 3-0-3
Theory and practice in techniques of officiating. This course does not replace the physical activity course(s) requirement for the award of the Associate of Arts, Associate of Science, Associate of Applied Science, Associate of General Studies nor the Associate of Applied Science of Applied Technology degrees. Prerequisite: None.

KINE 1321 Coaching/Sports/Athletics I 3-0-3
Techniques and theories underlying the coaching of men's and women's sports. Special emphasis upon AIDS, equipment, organization, and administration of the program. This course does not replace the physical activity course(s) requirement for the award of the Associate of Arts, Associate of Science, Associate of Applied Science, Associate of General Studies nor the Associate of Applied Science of Applied Technology degrees. Prerequisite: None.

KINE 1331 Physical Education for Elementary Majors 3-0-3
This course is designed to give a foundation for a working knowledge of activities that are appropriate for elementary children, especially those in grades Pre-K through 5th grade. The students will learn to teach a variety of games, exercises, sport activities and dances appropriate for children. This course does not replace the physical activity course(s) requirement for the award of the Associate of Arts, Associate of Science, Associate of Applied Science, Associate of General Studies nor the Associate of Applied Science of Applied Technology degrees. Prerequisite: None.

KINE 1338 Concepts of Physical Fitness – Personal Trainer – NCSF Trainer Certification Course 3-0-3
To provide professional development as well as theoretical proficiency required for qualified personal trainers. This course will also provide a hands-on approach as an integral component of preparation for careers that emphasize exercise prescription and training utilizing a practical skill approach. After completion of this program students will be prepared to sit for the NCSF-CPT exam and enter the job market with a valid credential denoting their qualified status. This course does not replace the physical activity course(s) requirement for the award of the Associate of Arts, Associate of Science, Associate of Applied Science, Associate of General Studies nor the Associate of Applied Science of Applied Technology degrees. Prerequisite: None.

KORE Korean

KORE 1311 Beginning Korean I 3-0-3
Fundamental skills in listening, comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture.

KORE 1312 Beginning Korean II 3-0-3
Fundamental skills in listening, comprehension, speaking, reading, and writing. Includes basic vocabulary, grammatical structures, and culture. Prerequisite: KORE 1311 with a grade of "C" or above.

KORE 1411 Beginning Korean I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

KORE 1412 Beginning Korean II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: KORE 1411 with a grade of "C" or above.

KORE 2311 Intermediate Korean I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisite: KORE 1411 and 1412 with a grade of "C" or above.

KORE 2312 Intermediate Korean II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: KORE 2311 with a grade of "C" or above.

LGLA Paralegal/Legal Assistant

LGLA 1300 Elder Law 3-0-3
Fundamental concepts of elder law, including financial and estate planning, public benefits, health care, personal planning and protection, and consumer protection emphasizing the paralegal's role in elder law.

LGLA 1301 Legal Research and Writing 3-0-3
Presents the fundamentals of legal research and writing emphasizing the paralegal's role including resources and processes used in legal research and writing.

LGLA 1304 Military and National Security Legal Issues 3-0-3
Emphasizes the role of the paralegal and presents fundamentals of the United States military legal system including an introduction to the Uniform Code of Military Justice, military regulations, and court decisions involved in military law emphasizing emerging issues of national security laws.

LGLA 1307 Introduction to Law and the Legal Profession 3-0-3
Overview of the law and the legal professions including legal concepts, systems, and terminology; substantive areas of law and the federal and state judicial systems; ethical obligations and regulations; professional trends and issues with emphasis on the paralegal's role.

LGLA 1317 Law Office Technology 3-0-3
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. Recommended co-requisite: ITSW 1401.

LGLA 1343 Bankruptcy 3-0-3
This course presents fundamental concepts of bankruptcy law and procedure with emphasis on the paralegal's role. Topics include individual and business liquidation and reorganization.

LGLA 1345 Civil Litigation 3-0-3
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.

LGLA 1349 Constitutional Law 3-0-3
This course provides an overview of the United States Constitution and its articles, amendments, and judicial interpretations. Topics include separation of powers, checks and balances, governmental structures and process, and individual rights in relation to government.

LGLA 1351 Contracts 3-0-3
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 and the Uniform Commercial Code.

LGLA 1353 Wills, Trust and Probate Administration 3-0-3
This course presents fundamental concepts of the law of wills, trusts, and probate administration with emphasis on the paralegal's role. Recommended co-requisite: LGLA 1345.

LGLA 1355 Family Law 3-0-3
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, and the parent-child relationship.

LGLA 1357 Juvenile Law 3-0-3
This course presents fundamental concepts of juvenile law with emphasis on the paralegal's role. Topics include differences between the criminal and juvenile justice systems, detention, adjudication, disposition, certification procedures, and related issues within the public education system.

LGLA 1372 National Security Law 3-0-3
Emphasizes emerging issues of national security laws, terrorism and national security crimes, national security detentions and trials, military tribunals, and clandestine operations. It includes legal challenges to Intelligence Operations and Collection, as well as legal issues involved in detaining and interrogating terrorist suspects, and prosecution of accused terrorists and their supporters in criminal courts and before military tribunals.

LGLA 1391 Special Topics in Paralegal/ Legal Assistance 3-0-3
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. This course was designed to be repeated multiple times to improve student proficiency.

LGLA 2303 Torts and Personal Injury Law 3-0-3
Fundamental concepts of tort and personal injury law including intentional torts, negligence, and strict liability are presented with emphasis on the paralegal's role in tort and personal injury law.

LGLA 2307 Law Office Management 3-0-3
This course presents the fundamentals of principles and structure of management, administration, and substantive systems in the law office including law practice technology as applied to paralegals. Recommended prerequsite: LGLA 1307.

LGLA 2309 Real Property 3-0-3
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 the recording of and searching for real estate documents.

LGLA 2311 Business Organizations 3-0-3
This course presents basic concepts of business organizations with emphasis on the paralegal's role. Topics include law of agency, sole proprietorships, forms of partnerships, corporations, and other emerging business entities. Recommended prerequisite LGLA 1351.

LGLA 2313 Criminal Law and Procedure 3-0-3
This course presents the fundamental concepts of criminal law from arrest to final disposition, principles of federal and state law, and the role of the paralegal in the preparation of pleadings and motions.

LGLA 2321 Military Law 3-0-3
This course presents an overview of the operation and management of military law as applied to paralegals including detailed coverage of Uniform Code of Military Justice (UCMJ), claims, military administrative law, legal assistance, and civil law as it applies to the military.

LGLA 2331 Advanced Legal Research & Writing 2-3-3
Builds on previous legal research and writing courses and covers standard and electronic research techniques and preparation of complex legal documents with emphasis on the paralegal's role.

LGLA 2333 Advanced Legal Document Preparation 3-0-3
The use of office technology skills in preparation of legal documents by paralegals based on hypothetical situations drawn from various areas of law.

LGLA 2335 Advanced Civil Litigation 3-0-3
Implementation of advanced civil litigation techniques with emphasis on the paralegal's role. Builds upon skills required in prior civil litigation courses. Prerequisite: LGLA 1345.

LGLA 2388 Internship- Paralegal/ Legal Assistant 0-9-3
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. Prerequisite: Department approval required.

MATH Mathematics

MATH 1316 Plane Trigonometry 3-0-3
Topics include trigonometric functions, radian and degree measure, circular functions, solving right and oblique triangle problems, deriving and verifying trigonometric identities, inverse trigonometric functions, and solving conditional equations. Prerequisites: Appropriate placement score or completion of the appropriate level of Developmental Studies course.

MATH 1324 Mathematics for Business and Social Sciences I (Finite Mathematics) 3-0-3
Topics from college algebra (linear equations, quadratic equations, functions and graphs, inequalities), mathematics of finance (simple and compound interest, annuities), linear programming, matrices, systems of linear equations, applications to management, economics, and business. Prerequisite: Appropriate placement score or TSI exemption or completion of the appropriate level of Developmental Studies course.

MATH 1325 Mathematics for Business and Social Sciences II (Business Calculus) 3-0-3
Topics include limits and continuity; derivatives; graphing and optimization; exponential and logarithmic functions; antiderivates; integration; and applications to management, economic, and business. Prerequisites: MATH 1414 or MATH 1324 with a grade of "C" or above.

MATH 1332 Contemporary Mathematics I 3-0-3
Topics include sets, logic, number theory, geometric concepts, consumer finance, and an introduction to probability and statistics. Prerequisite: Appropriate placement score or TSI exemption or completion of the appropriate level of Developmental Studies course. This course is for non-mathematics, non-science, and non-business students.

MATH 1342 Elementary Statistical Methods 3-0-3
Topics include the collecting, organizing, and displaying of data; measures of central tendency, measures of variation, histograms, probability; probability distributions, binomial distributions, normal distributions, linear regression and their applications. Prerequisites: Appropriate placement score or TSI exemption or completion of the appropriate level of Developmental Studies course. This course is for non-mathematics, non-science, and non-business students.

MATH 1350 Fundamentals of Mathematics I 3-0-3
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 the first semester of a two-semester sequence designed for prospective elementary and middle school teachers. This course extends the foundational ideas of mathematics so that prospective elementary/middle school teachers have an explicit understanding of elementary analysis. Prerequisite: A grade of "C" or above in MATH 1414.

MATH 1351 Fundamentals of Mathematics II 3-0-3
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 is the second semester of a two-semester sequence designed for prospective elementary and middle school teachers. This course extends the foundational ideas of mathematics so that prospective elementary/middle school teachers have an explicit understanding of these concepts. Prerequisite: A grade of "C" or above in MATH 1414.

MATH 1414 College Algebra 4-0-4
A study of relations and functions, polynomial functions and equations of degree higher than two, exponential and logarithmic functions and equations, matrices, and determinants, sequences and series, the binomial theorem, and mathematical induction. This course meets the college core requirement and is recommended for students planning to transfer to bachelor's degree programs. Graded exercises, guided practice, and graded quizzes will be completed in a non-lecture, lab environment requiring a minimum of one contact hour per week of activity. Prerequisites: Appropriate placement score or TSI exemption or completion of the appropriate level of Developmental Studies course.

MATH 2318 Linear Algebra 3-0-3
Topics include finite dimensional vector spaces; linear transformations and matrices; quadratic forms; and eigenvalues and eigenvectors. Prerequisite: MATH 2414 with a grade of "C" or above.

MATH 2412 Precalculus Math 4-0-4
Topics include applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. Prerequisite: MATH 1414 with a grade of "C" or above. (A previous study of trigonometry is helpful but not required.)

MATH 2413 Calculus I 4-0-4
Calculus I is a first course in calculus which emphasizes limits and continuity; the Fundamental Theorem of Calculus; derivatives and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule; the mean value theorem; rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions; and an application to calculation of areas. Prerequisite: MATH 2412 with a grade of "C" or above.

MATH 2414 Calculus II 4-0-4
Calculus II is a second course in calculus which emphasizes differentiation and integration techniques of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; and improper integrals. Prerequisite: MATH 2413 with a grade of "C" or above.

MATH 2415 Calculus III 4-0-4
Calculus III is a third course in calculus which emphasizes vectors and vector-valued functions; partial differentiation; Lagrange multipliers; multiple integrals; Jacobians; and application of the line integral which includes Green's Theorem, the Divergence Theorem, and Stoke's Theorem. Prerequisite: MATH 2414 with a grade of "C" or above.

MBST Maintenance Technology see also CBFM, CNBT, CRPT, ELPT, PFPB and WDWK

MBST 1507 Masonry I 2-7-5
Introduction to masonry including safety, tools and equipment, masonry materials, theory, terminology, federal and state guidelines, building plans, mortar mixing and spreading. Emphasis on the fundamentals of laying bricks and block. Prerequisite: CRPT 1429.

MDCA Office Technology see also HITT, MRMT, POFI, POFM and POFT

MDCA 1302 Human Disease/Pathophysiology 2-4-3
A study of anatomy and physiology with emphasis on human pathophysiology, including etiology, prognosis, medical treatment, signs and symptoms of common diseases of all body systems.

MDCA 1409 Anatomy and Physiology for Medical Assistants 3-4-4
Emphasis on structure and function of human cells, tissues, organs, and systems with overview of common pathophysiology.

MLAB Medical Lab Technician

MLAB 1201 Introduction to Clinical Laboratory Science 1-1-2
An introduction to medical laboratory science, structure, equipment, philosophy. Quality control, laboratory math, safety, basic laboratory equipment, laboratory settings, accreditation and certification. Attention will be focused on basic didactic and practical techniques in the following laboratory areas: microscopy, phlebotomy, immunology, and clinical microbiology. Co-requisite: MLAB 1211.

MLAB 1211 Urinalysis and Body Fluids 1-4-2
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. Attention will be focused on basic didactic and practical techniques in urinalysis. Body fluids are taught in MLAB 1415 and MLAB 2401. Co-requisite: MLAB 1201.

MLAB 1331 Parasitology/Mycology 2-4-3
An introductory course in clinical parasitology, mycology, and virology. A study of the taxonomy, morphology, and pathogenesis of human parasites, fungi, and viruses and the practical application of laboratory procedures, quality control, quality assurance and safety. Prerequisite: MLAB 1201, 1211.

MLAB 1415 Hematology 3-3-4
The study of blood cells in normal and abnormal conditions. Instruction in the theory and practical application of routine and special hematology procedures, including quality control, quality assurance, safety, both manual and automated; red blood cells and white blood cells maturation sequences, and normal and abnormal morphology and associated diseases. Prerequisite: MLAB 1201, 1211.

MLAB 2401 Clinical Chemistry 3-3-4
An introduction to the principles, procedures, physiological basis, and significance of testing performed in Clinical Chemistry. Also includes basic chemical laboratory technique, electrolytes and acid-base balance, proteins, carbohydrates, lipids, enzymes, metabolites, endocrine function, and toxicology and chemical analysis of body fluids. Prerequisite: MLAB 1201, 1211, 1415, BIOL, 2401, 2402, CHEM 1411, 1412, MATH 1414.

MLAB 2431 Immunohematology 3-3-4
A study of blood antigens and antibodies. Presents quality control, basic laboratory techniques and safety. Includes the principles, procedures and clinical significance of test results in genetics, blood group and Rh typing, pre-transfusion testing, adverse effects of transfusions, and donor selection and components, and hemolytic disease of the newborn. Included in this course is a study of the theory and application of basic immunology including the principles of serological procedures. Prerequisite: MLAB 1201, 1211, 1415, BIOL 2401, 2402.

MLAB 2434 Clinical Microbiology 3-3-4
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: MLAB 1201, 1211, 1415.

MLAB 2460 Clinical II - Medical Laboratory Technician 0-18-4
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. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Course may be repeated if topics and learning outcomes vary. Weekly site visits are conducted by the college faculty. Prerequisite: MLAB 2561.

MLAB 2461 Clinical III - Medical Laboratory Technician 0-18-4
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. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Course may be repeated if topics and learning outcomes vary. Weekly site visits are conducted by the college faculty. Prerequisite: MLAB 2561, 2460.

MLAB 2561 Clinical I - Medical Laboratory Technician 0-25-5
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. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement is the responsibility of the college faculty. Course may be repeated if topics and learning outcomes vary. Weekly site visits are conducted by the college faculty. Prerequisite: MLAB 1201, 1211, 1415, BIOL 2401, 2402, CHEM 1411, 1412, MATH 1414, ITSC 1409

MRKG Business Administration and Management see also BMGT, BUSG and HRPO

MRKG 1302 Principles of Retailing 3-0-3
Introduction to the retailing environment and its relationship to consumer demographics, trends, and traditional/nontraditional retailing markets. The employment of retailing techniques and the factors that influence modern retailing.

MRKG 1311 Principles of Marketing 3-0-3
Introduction to basic marketing functions; identification of consumer and organizational needs; explanation of economic, environmental, psychological, sociological, and global issues; and description and analysis of the importance of marketing research.

MRKG 2333 Principles of Selling 3-0-3
Overview of the selling process. Identification of the elements of the communication process between buyers and sellers. Examination of the legal and ethical issues of organizations which affect salespeople.

MRMT Office Technology see also HITT, MDCA, POFI, POFM, and POFT

MRMT 1307 Medical Transcription I 2-4-3
Fundamentals of medical transcription with hands-on experience in transcribing physician dictation including basic reports such as history and physicals, discharge summaries, consultations, operative reports, and other medical reports. Utilizes technology compatible with industry standards. Designed to develop speed and accuracy. Prerequisite: HITT 1305 or concurrent enrollment. Keyboarding proficiency and written communication skills recommended.

MRMT 2166 Practicum - Medical Transcription/ Transcriptionist 0-8-1
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: completion of all courses in the certificate and Departmental approval.

MRMT 2333 Medical Transcription II 2-4-3
Transcription of medical reports with increasing speed and accuracy including history and physicals, consultations, discharge summaries, operative reports, and other medical reports. Prerequisite: MRMT 1307.

MRMT 2357 Advanced Medical Transcription 2-4-3
Application of highly developed medical transcription skills. Includes use of technology and medical resources to produce correct medical documents from their inception as dictated materials to their inclusion in the patient health record. Prerequisite: MRMT 2333 or Departmental approval.

MSMG Military Science Management (ROTC)

The credit received from these courses is not transferable to a degree and cannot be applied towards degree completion.

MSMG 1201 Leadership and Personal Development 2-2-2
The course introduces cadets to the personal challenges and competencies that are critical for effective leadership. Cadets learn how the personal development of life skills such as time management, physical fitness, and stress management relate to leadership, officership, and Army operations. Focus is placed on developing basic knowledge and comprehension of Army Leadership Dimensions while gaining a broad understanding of the ROTC program, its purpose in the Army, and its advantages for the student. One Two hour lecture and one Two hour Lab a week for one semester.

MSMG 1203 Introduction to Tactical Leadership 2-2-2
This course presents an overview of leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises. Cadre role models and the building of stronger relationships among the cadets through common experience and practical interaction are critical aspects of this course. Prerequisite: None. One Two hour lecture and one Two hour Lab a week for one semester.

MSMG 1310 Foundations of Leadership 2-2- 3
This course explores the dimensions of creative and innovative tactical leadership strategies and styles by studying historical case studies and engaging in interactive student exercises. Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises. Focus is on continued development of the knowledge of leadership values and attributes through an understanding of rank, uniform, customs, and courtesies. Leadership case studies provide tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the Contemporary Operating Environment (COE). Prerequisites: Leadership and Personal Development and Introduction to Tactical Leadership or approval of the Military Science department. One Two hour lecture and one Two hour Lab a week for one semester.

MSMG 1312 Foundations of Tactical Leadership 2-2-3
This course examines the challenges of leading teams in the complex contemporary operating environment (COE). The course highlights dimensions of cross-cultural challenges of leadership in a constantly changing world and applies these challenges to practical Army leadership tasks and situations. Cadets develop greater self-awareness as they practice communication and team building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios. Prerequisites: Leadership and Personal Development, Introduction to Tactical Leadership and Foundations of Leadership or approval of the Military Science department. One Two hour lecture and one Two hour Lab a week for one semester.

MUAP Music Applied

INDIVIDUALIZED INSTRUCTION IS OFFERED IN THE FOLLOWING AREAS - Voice, Piano, Winds, Strings, Brass, Percussion. Literature from all style periods and technical skills will be emphasized. One half hour lesson per week for Levels I and II. One hour lesson per week for Levels III and IV. One hour practice per day is required. Instructor approval. Special fees apply.

Course		Title	Prerequisite	Credit
MUAP	**1137**	**Brass I**	None	**0-1-1**
MUAP	**1138**	**Brass II**	MUAP 1137	**0-1-1**
MUAP	**2237**	**Brass III**	MUAP 1138	**0-2-2**
MUAP	**2238**	**Brass IV**	MUAP 2237	**0-2-2**
MUAP	**1169**	**Piano I**	None	**0-1-1**
MUAP	**1170**	**Piano II**	MUAP 1169	**0-1-1**
MUAP	**2269**	**Piano III**	MUAP 1170	**0-2-2**
MUAP	**2270**	**Piano IV**	MUAP 2269	**0-2-2**
MUAP	**1157**	**Percussion I**	None	**0-1-1**
MUAP	**1158**	**Percussion II**	MUAP 1157	**0-1-1**
MUAP	**2257**	**Percussion III**	MUAP 1158	**0-2-2**
MUAP	**2258**	**Percussion IV**	MUAP 2257	**0-2-2**
MUAP	**1101**	**Strings I**	None	**0-1-1**
MUAP	**1102**	**Strings II**	MUAP 1101	**0-1-1**
MUAP	**2201**	**Strings III**	MUAP 1102	**0-2-2**
MUAP	**2202**	**Strings IV**	MUAP 2201	**0-2-2**
MUAP	**1181**	**Voice I**	None	**0-1-1**
MUAP	**1182**	**Voice II**	MUAP 1181	**0-1-1**
MUAP	**2281**	**Voice III**	MUAP 1182	**0-2-2**
MUAP	**2282**	**Voice IV**	MUAP 2281	**0-2-2**
MUAP	**1117**	**Woodwinds I**	None	**0-1-1**
MUAP	**1118**	**Woodwinds II**	MUAP 1117	**0-1-1**
MUAP	**2217**	**Woodwinds III**	MUAP 1118	**0-2-2**
MUAP	**2218**	**Woodwinds IV**	MUAP 2217	**0-2-2**

MUEN Music

MUEN 1132 Chamber (Small) Instrumental Ensembles 1-1-1
Smaller instrumental ensembles: wind, string, percussion, piano, or laboratory (jazz, rock, fusion, or contemporary).

MUEN 1142 Major (large) Vocal Ensemble 1-1-1
This course is open to all students. The ensemble will perform a variety of styles of music and will perform on and off campus. Music majors are required to take one ensemble each semester. Prerequisite: none

MUEN 1152 Chamber (Small) Vocal Ensembles 1-1-1
Vocal ensemble, glee club, madrigal, or small swing choir.

MUSI Music

MUSI 1116 Sight Singing and Ear Training I 1-1-1
This course is designed to help the student develop the aural skills pertinent to proficiency in music theory. It includes the study and proper identification of melodic patterns, intervals and triads, and exercises in melodic dictation. This course should be taken concurrently with MUSI 1311. Prerequisite: None. This is a required course for music majors.

MUSI 1117 Sight Singing and Ear Training II 1-1-1
A continuation of Ear Training and Sight Singing I. Sight singing, intervals, triads, and seventh chords, asymmetric and mixed meters. Exercises in melodic and harmonic dictation. Prerequisite: MUSI 1116. This course should be taken concurrently with MUSI 1312. This is a required course for music majors.

MUSI 1181 Piano Class I 1-1-1
Introduction to the keyboard. Beginning and elementary level teaching literature and technical skills will be emphasized. Course is geared towards students who have little or no previous musical experience. Five hours weekly practice is required. Open to all students. Prerequisite: None.

MUSI 1183 Voice Class I 1-1-1
This course is concerned with the most basic principles of singing; correct breathing, posture and the proper use of the vocal anatomy (i.e., palate, larynx, and tongue). Basic vocal literature will be introduced. Open to All Students. Prerequisite: None.

MUSI 1188 Percussion Class I 1-1-1
Class instruction in the fundamental techniques of playing and teaching percussion instruments. Prerequisite: None.

MUSI 1192 Guitar Class I 1-1-1
This course is an introduction to the guitar. Beginning level literature and technical skills will be emphasized. Course is geared towards students who have little or no musical experience. Practice outside class is required. Open to all students. Prerequisite: None.

MUSI 1301 Fundamentals of Music I 3-0-3
An introduction to music including note reading, rhythm, intervals, triads, scales, and key signatures. Open to all students. Prerequisite: None.

MUSI 1304 Foundations of Music 3-0-3
A study of the basic fundamentals of music with an introduction to melodic, rhythmic, and harmonic instruments. Emphasis on participation in singing and reading music. For students in the field of education and the general college student. This course is not for music majors. Prerequisite: None.

MUSI 1306 Music Appreciation 3-0-3
This course is designed for the general college student. It emphasizes intelligent, directed listening to music with attention focused on the materials, the forms and the periods and styles of music. Course work will also cover the relation of music to other areas of cultural development. Prerequisite: None.

MUSI 1307 Music Literature 3-0-3
An in-depth study of the music, literature and history from the 15th through the 20th centuries. Emphasis will be placed on principle forms and composers of the literature of those historical periods. This course is designed for music majors, but is also appropriate for any student who has prior musical knowledge. Prerequisite: None.

MUSI 1311 Music Theory I 3-0-3
A continuation of Music Fundamentals. Harmonic progressions, seventh chords, cadences, pentatonic, and modal scales with an introduction to four-part writing. Prerequisite: MUSI 1301 or placement exam by the instructor. This course should be taken concurrently with MUSI 1116. This course is required for music majors.

MUSI 1312 Music Theory II 3-0-3
A continuation of Music Theory I with an introduction to four-part writing and analysis of music. Prerequisite: MUSI 1311 or placement exam by the instructor. This course should be taken concurrently with MUSI 1117. This course is required for music majors.

MUSI 1390 Electronic Music I 3-0-3
An introduction to the use of synthesizers, computers, sequencing, music printing software, multi-rack, recorders, and other MIDI devices in the notation, arranging composition, and performance of music. Prerequisite: The ability to read music, play an instrument or instructor approval.

MUSI 2311 Music Theory III 3-0-3
A study of the harmonic materials of the 18th and 19th centuries through analysis and written exercises. Dominant and secondary seventh chords, secondary dominants, the diminished seventh chord, the Neapolitan sixth, the augmented sixth chords, nonharmonic tones, harmonic tones, harmonic dictation for the keyboard. Prerequisite: MUSI 1312. This course is required for music majors.

MUSI 2312 Music Theory IV 3-0-3
The study of harmony as an organizing element of the large-scale musical structure. Diatonic, chromatic and inharmonic modulations; the modulating sequence. Melody harmonization, analysis of larger works, harmonic dictation. Modulation to related and distant keys on the keyboard. Prerequisite: MUSI 2311. This course is required for music majors.

PASH Pashtu

PASH 1411 Beginning Pashtu I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

PASH 1412 Beginning Pashtu II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: PASH 1411 with a grade of "C" or above.

PASH 2311 Intermediate Pashtu I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisite: PASH 1411 and 1412 with a grade of "C" or above.

PASH 2312 Intermediate Pashtu II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: PASH 2311 with a grade of "C" or above.

PERS Persian-Iranian/Afghan

PERS 1411 Beginning Persian-Iranian/Afghan I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

PERS 1412 Beginning Persian-Iranian/Afghan II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: PERS 1411 with a grade of "C" or above.

PERS 2311 Intermediate Persian-Iranian/ Afghan I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisite: PERS 1411 and 1412 with a grade of "C" or above.

PERS 2312 Intermediate Persian- Iranian/ Afghan II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: PERS 2311 with a grade of "C" or above.

PFPB Maintenance Technology see also CBFM, CNBT, CRPT, ELPT, MBST and WDWK

PFPB 2409 Residential Const. Plumbing I 3-3-4
Skill development in the procedures and techniques employed by a plumber in the rough-in and top-out stages of a new home or the remodeling of an older home.

PFPB 2445 Residential Const. Plumbing II 3-3-4
Installation of residential plumbing fixtures used in single- and multi-family housing. Prerequisite: PFPB 2409.

PHIL Philosophy

PHIL 1301 Introduction to Philosophy 3-0-3
Introduction to the study of ideas and their logical structure, including arguments and investigations about abstract and real phenomena. Includes introduction to the history, theories, and methods of reasoning.

PHIL 1304 Introduction to World Religions 3-0-3
A comparative study of various world religions.

PHIL 1316 History of Religions I 3-0-3
In a historical survey of major religions, this course focuses on the history and literature of Ancient Judaism during the Old Testament period emphasizing its development of social, political, and religious institutions and ideas.

PHIL 1317 History of Religions II 3-0-3
In a historical survey of major religions, this course focuses on the history and literature of Early Christianity during the New Testament period emphasizing its origin, development, and expansion of religious institutions and ideas.

PHIL 2303 Introduction to Logic 3-0-3
Nature and methods of clear and critical thinking and methods of reasoning such as deduction, induction, scientific reasoning, and fallacies.

PHIL 2306 Introduction to Ethics 3-0-3
Classical and contemporary theories concerning the good life, human conduct in society, and moral and ethical standards.

PHIL 2307 Introduction to Social and Political Philosophy 3-0-3
Critical examination of the major philosophical theories concerning the organization of societies and the role and scope of government.

PHYS Physical Science

PHYS 1401 College Physics I 3-3-4
This is the first part of a one-year algebra-based physics course. This course includes the fundamentals of classical Mechanics, Thermal Physics, and Wave Motion. The student will be introduced to the basic principles of linear and rotational Kinematics and Dynamics, Newton's laws of motion, work and Energy, Impulse and Momentum, Elasticity, Simple Harmonic Motion, Fluids, Temperature and Heat, The Transfer of Heat, The Ideal Gas Laws and Kinetic Theory, Thermodynamics, Waves and Sound, Linear Superposition and Interference Phenomena. This is a required course for students who plan to major in Medicine, Dentistry, Veterinary Science, Pharmacy, and all other Biological or Health science disciplines. Methods of instruction include practical laboratory experiments, application of modern technology, and guided discussions. The course includes three hours of lecture and three hours of laboratory per week, usually offered in the fall and summer semesters. Prerequisite: MATH 1414 or concurrent enrollment. Co-requisite: PHYX 1401.

PHYS 1402 College Physics II 3-3-4
This is the second part of a one-year algebra-based physics course. This course includes the basic principles of Electricity and Magnetism, Light and Optics, and modern advances in physics, namely, Relativity, Atomic and Nuclear Physics. The topics covered in this course are as follows: Electrostatics (Electric forces, Electric fields and Electric Potentials); Electric Circuits, (DC and AC); Magnetic Forces and Magnetic Field; Electromagnetic Induction and Electromagnetic Waves; Light (Geometrical and Wave Optics); Special Relativity; The Nature of the Atom; Nuclear Physics and Radioactivity. This is a required course for students who plan to major in any Health science disciplines. Methods of instruction include practical laboratory experiments, application of modern technology, and guided discussions. The course includes three hours of lecture and three hours of laboratory per week, usually offered in the spring semester only. Prerequisite: PHYS 1401 or consent of the Department Chair and Instructor. Co-requisite: PHYX 1402.

PHYS 1403 Stars and Galaxies 3-2-4
This course is designed to give an overview of the visible universe. The objective throughout this course is to explain how astronomers know the many curious things they have learned about our universe. It brings the universe alive, in a sense, by showing the drama of the birth, evolution, and death of stars. What is the universe? Did the universe have a beginning? Will the universe last forever? These cosmological questions are answered in a qualitative way. The chances of life elsewhere in the universe, and how we might know about it are discussed. Planetarium and Observatory are used extensively. Methods of instruction include practical laboratory experiments, application of modern technology, and guided discussions. The course is structured around the lecture-lab format (i.e., depending on the topic, it may be necessary to do a hands-on activity before lecturing on the concept). The class meets twice a week, three hours per day.

PHYS 1404 Solar System 3-2-4
This course is an introduction to Astronomy. The approach is very qualitative, but simple mathematics skills are required. The course is designed to explain the origin of the Solar System including the Sun and its nine planets, and smaller bodies - satellites (moon) orbiting the planets, asteroids, and comets. The students are also exposed to the basic idea of the function of a telescope. Planetarium and Observatory are used extensively. Methods of instruction include practical laboratory experiments, application of modern technology, and guided discussions. The course is structured around the lecture-lab format (i.e., depending on the topic, it may be necessary to do a hands-on activity before lecturing on the concepts). The class meets twice a week, three hours per day.

PHYS 1405 Elementary Physics I 3-3-4
A survey of the fundamental principles of physics designed to acquaint students with the basic concepts of classical and modern physics which are the foundation of everyday phenomena. Offered at C&I locations only.

PHYS 1415 Physical Science I 3-3-4
This is an introductory course on Physical Science for the first year non-science majors; strongly recommended for students in teacher training program. It is designed to provide skills needed for success in other science classes and for improving science literacy. The course emphasizes the basic concepts in Physics, Chemistry, Earth Science, and Astronomy. Methods of instruction include practical laboratory experiments, application of modern technology, and guided discussions. The course is structured around the lecture-lab format (i.e., depending on the topic, it may be necessary to do a hands-on activity before lecturing on the concept). The class meets twice a week, three hours per day. Prerequisite: None. Co-requisite: PHYX 1415.

PHYS 2425 University Physics I 3-3-4
This is the first part of a one-year calculus-based physics course. It includes the materials from kinematics to special relativity. This course presents the fundamental principles of classical Mechanics, Heat and Thermodynamics, and Waves and Oscillations. It presumes that the student is now taking

or has already taken calculus, but a modest knowledge of algebra, geometry and trigonometry is required. Whatever calculus is required will be included as the need arises. The student will be introduced to the basic principles of Vector algebra, Kinematics and Dynamics of Motion, Newton's laws, Work and Energy, Impulse and Momentum, Elasticity, Simple Harmonic Motion, Fluids, Temperature and Heat, The Transfer of Heat, The Ideal Gas Laws and Kinetic Theory, Thermodynamics, Waves and Oscillation, Linear Superposition and Interference Phenomena, Sound Waves, Special Theory of Relativity. This is a required course for students who plan to major in Engineering, Computer Science and in any subjects of Physical Science. Methods of instruction include practical laboratory experiments, application of modern technology, and guided discussions. The course includes three hours of lecture and three hours of laboratory per week, usually offered in the fall semester only. Prerequisite: MATH 2413 or concurrent enrollment. Co-requisite: PHYX 2425.

PHYS 2426 University Physics II 3-3-4
This is the second part of a one-year calculus-based physics course and it includes the materials from Electrostatics to Atomic and Nuclear Physics. It presumes that the student is now taking or has already taken calculus, but a modest knowledge of algebra, geometry, and trigonometry is required. Whatever calculus is required will be included as the need arises. The student will be introduced to the basic principles of Electricity, Magnetism, Electromagnetic Waves, Properties of Light, Optical Devices, and the Nature of Atoms, Molecules, and Nucleus. This is a required course for students who plan to major in Engineering, Computer Science, and in any subjects of Physical Science. Methods of instruction include practical laboratory experiments, application of modern technology, and guided discussions. The course includes three hours of lecture and three hours of laboratory per week, usually offered in the spring semester only. Prerequisite: PHYS 2425 or consent of the Department Chair and Instructor. Co-requisite: PHYX 2426.

POFI Office Technology see also HITT, MDCA, MRMT, POFM and POFT

POFI 1301 Computer Applications I 2-4-3
This course is an overview of office computer applications including current terminology and technology. An introduction to computer hardware, software applications, and procedures. Prerequisite: Keyboarding skills or concurrent enrollment in keyboarding course recommended.

POFI 1349 Spreadsheets 2-4-3
Skill development in concepts, procedures, and application of spreadsheets. Prerequisite: An introduction to a computer application course or equivalent recommended.

POFI 2301 Word Processing 2-4-3
Word processing software focusing on business applications. Prerequisite: Keyboarding proficiency recommended.

POFI 2331 Desktop Publishing 2-4-3
In-depth coverage of desktop publishing terminology, text editing, and use of design principles. Emphasis on layout techniques, graphics, multiple page displays, and business applications. Prerequisite: Keyboarding and word processing skills or concurrent enrollment in word processing course recommended.

POFI 2340 Advanced Word Processing 2-4-3
Advanced word processing techniques using merging, macros, graphics, and desktop publishing. Includes extensive formatting for technical documents. Prerequisite: Keyboarding and word processing skills recommended.

POFI 2386 Internship - Business/Office Automation/ Technology/Data Entry 0-9-3
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. Completion of course requires 144 contact hours as well as strong keyboarding/word processing proficiency and written communication skills. Concurrent enrollment in or completion of first year Office Technology courses recommended. Departmental approval required.

POFI 2387 Internship - Business/Office Automation/ Technology/Data Entry 0-9-3
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. Completion of course requires 144 contact hours as well as strong keyboarding/word processing proficiency and written communication skills. Concurrent enrollment in or completion of second year Office Technology courses recommended. Departmental approval required.

POFM Office Technology see also HITT, MDCA, MRMT. POFI and POFT

POFM 1302 Medical Software Applications 2-4-3
Medical software applications for the management and operation of health care information systems. Keyboarding proficiency recommended.

POFM 1317 Medical Administrative Support 2-4-3
Instruction in medical office procedures including appointment scheduling, medical records creation and maintenance, telephone communications, coding, billing, collecting, and third party reimbursement.

POFM 1327 Medical Insurance 2-4-3
Survey of medical insurance including the life cycle of various claim forms, terminology, patient relations, and legal and ethical issues. Prerequisite: HITT 1305. Keyboarding and computer skills recommended.

POFM 2310 Intermediate Medical Coding 2-4-3
Assignment and application of various coding guidelines with emphasis on physician billing and regulatory requirements. Includes code selection for Evaluation and Management (E/M) and Medical/Surgical cases. Prerequisites: HITT 1341 or POFM 1300.

POFM 2386 Internship - Medical Administrative/ Executive Assistant and Medical Secretary 0-9-3
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. Departmental approval required upon completion of certificate requirements.

POFM 2387 Internship - Medical Administrative/ Executive Assistant and Medical Secretary 0-9-3
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. Departmental approval required upon completion of certificate requirements.

POFT Office Technology see also HITT, MDCA, MRMT. POFI and POFM

POFT 1207 Proofreading and Editing 2-1-2
Instruction in proofreading and editing skills necessary to assure accuracy in business documents.

POFT 1301 Business English 2-4-3
Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business. Keyboarding skills recommended.

POFT 1309 Administrative Office Procedures I 2-4-3
Study of current office procedures, duties and responsibilities applicable to an office environment.

POFT 1319 Records and Information Management I 2-4-3
Introduction to basic records and information management, including manual and electronic filing. Keyboarding skills or other computer literacy course recommended.

POFT 1325 Business Math and Machine Applications 2-4-3
Business math problem-solving skills using office technology.

POFT 1329 Beginning Keyboarding 2-4-3
Skill development in keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents.

POFT 1349 Administrative Office Procedures II 2-4-3
In-depth coverage of office applications with emphasis on decision making, goal setting, management theories, and critical thinking. Prerequisite: POFT 1301, POFT 1329 and concurrent enrollment in or completion of second year office technology courses recommended.

POFT 2312 Business Correspondence and Communication 2-4-3
Development of writing and presentation skills to produce effective business communications. Prerequisites: POFT 1301 or ENGL 1301.

POFT 2333 Advanced Keyboarding 2-4-3
A continuation of keyboarding skills in advanced document formatting emphasizing speed, accuracy, and decision-making. Keyboarding and word processing skills recommended.

POFT 2386 Internship - Administrative Assistant and Secretarial Science, General 0-9-3
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. Completion of course requires 144 contact hours as well as strong keyboarding/word processing proficiency and written communication skills. Concurrent enrollment in or completion of first year Office Technology courses recommended. Departmental approval required.

POFT 2387 Internship - Administrative Assistant and Secretarial Science, General 0-9-3
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. Completion of course requires 144 contact hours as well as strong keyboarding/word processing proficiency and written communication skills. Concurrent enrollment in or completion of second year Office Technology courses recommended. Departmental approval required.

POFT 2388 Internship - General Office Occupations and Clerical Services 0-9-3
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. Completion of course requires 144 contact hours as well as strong keyboarding/word processing proficiency and written communication skills. Concurrent enrollment in or completion of first year Office Technology courses recommended. Departmental approval required.

POFT 2389 Internship - General Office Occupations and Clerical Services 0-9-3
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. Completion of course requires 144 contact hours as well as strong keyboarding/word processing proficiency and written communication skills. Concurrent enrollment in or completion of second year Office Technology courses recommended. Departmental approval required.

PORT Portuguese

PORT 1411 Beginning Portuguese I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

PORT 1412 Beginning Portuguese II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: PORT 1411 with a grade of “C” or above.

PORT 2311 Intermediate Portuguese I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisite: PORT 1411 and 1412 with a grade of “C” or above.

PORT 2312 Intermediate Portuguese II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: PORT 2311 with a grade of “C” or above.

PSTR Hospitality Management see also CHEF, HAMG, IFWA, RSTO and TRVM

PSTR 1301 Fundamentals of Baking 2-4-3
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, and the use of proper flours.

PSTR 1302 Cake Baking and Production 2-4-3
Principles and techniques of cake production. Emphasizes ingredient identification, functions, mixing, and baking. Prerequisite: PSTR 1301.

PSTR 1306 Cake Decorating I 2-4-3
Introduction to skills, concepts and techniques of cake decorating.

PSTR 2307 Cake Decorating II 1-5-3
A course in decoration of specialized and seasonal products. Prerequisite: PSTR 1306.

PSTR 2331 Advanced Pastry Shop 2-4-3
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. Prerequisite: PSTR 1301.

PSTR 2350 Wedding Cakes 1-7-3
Skills, concepts, and techniques for preparing wedding cakes. Includes marzipan, plastic chocolate-rolled fondant, chocolate garnish, flower making, and royal icing piping work. Prerequisite: PSTR 1306.

PSYC Psychology

PSYC 1300 Learning Framework 3-0-3
This course is a study of research and theory in the psychology of learning, cognition, and motivation. The basis for the conceptual framework include factors that impact learning, strategic learning and the application of learning. Students use self-assessment instruments to help them identify personality types, learning styles, and vocational interest to help identify individual strengths and weakness as critical thinkers. Students are ultimately expected to integrate and apply the learning skills discussed across their academic program to become efficient and proficient learners in all subjects. Recommended: to be taken in the first semester.

PSYC 2301 General Psychology 3-0-3
Survey of major topics in psychology. Introduces the study of behavior and the factors that determine and affect behavior.

PSYC 2308 Child Psychology 3-0-3
The purpose of this course is to develop an understanding of children and to engender a real interest in them. Consideration is given to the human organism as it develops physically, mentally, emotionally, and socially from birth through adolescence.

PSYC 2314 Life Span Growth and Development 3-0-3
This course will study the relationship of the physical, emotional, social and mental factors of growth and development of children and adults through the life span.

PSYC 2315 Psychology of Adjustment 3-0-3
Study of the processes involved in adjustment of individuals to their personal and social environments.

PSYC 2316 Psychology of Personality 3-0-3
The study of various approaches to determinants, development, and assessment of personality. Prerequisite: PSYC 2301.

PSYT Mental Health Services see also CHLT, CMSW, DAAC and SCWK

PSYT 1309 Health Psychology 2-2-3
An exploration of behavioral medicine and the interdependence of mind, body, and spirit. Topics include stress and its effect on body systems, techniques for improving and maintaining health and physiological, psychological, behavioral, and social effects of disease and disabilities.

PSYT 1329 Interviewing and Communication Skills 2-4-3
This course provides instruction for the development of interviewing and communication skills in professional relationships. Students are encouraged to explore personal issues which may affect their ability to remain objective in the clinical setting. Demonstration of skills learned serves as an integral part of the lab process. Recommended: to be taken in the first semester.

PSYT 2321 Crisis Intervention 2-2-3
Examination of crisis management and intervention theories in assisting clients in crisis situations. This course introduces assessment skills and techniques in rating the severity of crisis in three areas; affective, cognitive and behavioral.

PSYT 2331 Abnormal Psychology 2-2-3
An examination and assessment of the symptoms, etiology, and treatment procedures of mental, emotional, and behavioral disorders. Attention is paid to diagnostic criteria, predisposing factors, and dual diagnosis. Recommended prerequisite: PSYC 2301.

PSYT 2345 Principles of Behavior Management and Modification 2-2-3
An analysis of behavior management and cognitive theories and techniques with emphasis on their applications. Topics covered include basic principles of behavior and behavior change, procedures to establish new behaviors, and procedures to increase desirable behaviors and decrease undesirable behaviors. Genetic, cultural, environmental, and social factors will be considered, as well as predisposing factors, perceptions, and prior learning.

PUNJ Punjabi

PUNJ 1411 Beginning Punjabi I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

PUNJ 1412 Beginning Punjabi II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: PUNJ 1411 with a grade of “C” or above.

PUNJ 2311 Intermediate Punjabi I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisite: PUNJ 1411 and 1412 with a grade of “C” or above.

PUNJ 2312 Intermediate Punjabi II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: PUNJ 2311 with a grade of “C” or above.

RELE Real Estate

RELE 1200 Contract Forms and Addenda 2-0-2
Promulgated Contract Forms, which shall include but is not limited to unauthorized practice of law, broker-lawyer committee, current promulgated forms, commission rules governing use forms and case studies involving use of forms. This course meets the Texas Real Estate Licensing Act (TRELA) requirement for a core course on Real Estate contract law.

RELE 1219 Real Estate Finance 2-0-2
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. This course meets the Texas Real Estate Licensing Act (TRELA) requirement for a core course on Real Estate contract law.

RELE 1303 Real Estate Appraisal 3-0-3
A 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.

RELE 1311 Law of Contracts 3-0-3
Elements of a contract, offer and acceptance, statue of frauds, specific performance and remedies for breach, unauthorized practice of law, commission rules relating to use of adopted forms, and owner disclosure requirements. This course meets the Texas Real Estate Licensing Act (TRELA) requirement for a core course on Real Estate contract law.

RELE 1315 Property Management 3-0-3
A study of the role of the property manager, landlord policies, operational guidelines, leases, lease negotiations, tenant relations, maintenance, reports, habitability laws, and the Fair Housing Act.

RELE 1325 Real Estate Mathematics 3-0-3
Basic arithmetic skills. Includes mathematical logic, percentages, interest, time value of money, depreciation, amortization, proration, and estimation of closing statements.

RELE 1406 Real Estate Principles 4-0-4
An overview of licensing as a real estate broker and 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. Also covers at least three hours of classroom instruction on federal, state, and local laws relating to housing, discrimination, housing credit discrimination, and community real estate principles reinvestment. This course meets the Texas Real Estate Licensing Act (TRELA) requirements for a core course on Real Estate principles. Fulfills the 60-hour requirement for salesperson license.

RELE 2301 Law of Agency 3-0-3
A study of 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 agency. This course meets the Texas Real Estate Licensing Act (TRELA) requirement for a core course on Real Estate Agency Law.

RELE 2488 Internship- Real Estate 0-19-4
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. Prerequisites: RELE 1311, 1406, 2301, and consent of the Department Chair.

RELE 2489 Internship- Real Estate 0-19-4
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. Prerequisite: RELE 2488 or BMGT 2488 or BMGT 2370 and consent of the Department Chair.

RNSG Nursing

RNSG 1105 Nursing Skills I 0-3-1
Study of the concepts and principles essential for demonstrating competence in the performance of nursing procedures. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. The concepts of communications, caring, community and critical thinking are used throughout the course. Prerequisite: Admission to Central Texas College and the Department of Nursing.

RNSG 1115 Health Assessment 0-3-1
Development of skills and techniques required for a comprehensive health assessment within a legal/ethical framework. This course lends itself to a blocked approach. The concepts of communication, caring, community and critical thinking will be included throughout the course. Prerequisite: BIOL 2401, ENGL 1301, RNSG 1209, BIOL 1406. Co-requisite: RNSG 1105, 1301, 1413, BIOL 2402.

RNSG 1209 Introduction to Nursing 2-0-2
Overview of nursing and the role of the associate degree nurse as a provider of care, coordinator of care, and member of a profession. Topics include knowledge, judgment, skills and professional values within a legal/ethical framework. The use of medical terminology and study and test-taking skills for technical courses and computer competency are included. This course lends itself to a blocked approach. The concepts of communications, caring, community and critical thinking are used throughout the course. Prerequisite: Admissions to Central Texas College.

RNSG 1229 Integrated Nursing Skills II 1-2-2
Study of the concepts and principles necessary to perform intermediate or advanced nursing skills for care of diverse patients across the life span. Content includes knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to an integrated approach. Prerequisite: Students must be Licensed Vocational Nurses, or EMT-Paramedics and receive Department Chair consent prior to enrolling. Completion of BIOL 2401, ENGL 1301, BIOL 1406 and PSYC 2301.

RNSG 1251 Care of the Childbearing Family 1-3-2
Study of concepts related to the provision of nursing care for childbearing families. Topics may include selected complications. Topics include knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. The concepts of communication, caring, community and critical thinking will be included throughout the course. Prerequisites: BIOL 2401, BIOL 2402, RNSG 1115, 1105, 1301, 1413, 1262.

RNSG 1262 Clinical-Nursing I (RN Training) 0-9-2
An introductory type of 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. This course includes clinical rotations in adult long term and acute health care settings. The concepts of communication, caring, community and critical thinking are used throughout the course. Clinical education is an unpaid learning experience. Prerequisites: BIOL 2401, ENGL 1301, RNSG 1209, RNSG 1105, and RNSG 1115, BIOL 1406. Co-requisites: RNSG 1413, BIOL 2402, RNSG 1301.

RNSG 1301 Pharmacology 3-0-3
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 medications within a legal/ethical framework. This course lends itself to a blocked or integrated approach. The concepts of communication, caring, community, and critical thinking will be included throughout the course. Prerequisites: BIOL 2401.

RNSG 1331 Principles of Clinical Decision-Making 2-3-3
Examination of selected principles related to the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession. Emphasis on clinical decision making for clients in medical-surgical settings experiencing health problems involving fluid and electrolytes; perioperative care; pain; respiratory disorders; peripheral vascular disorders; immunologic disorders; and infectious disorders. Discussion of knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked or integrated approach. The concepts of communication, caring, community, and critical thinking are used throughout the course. Prerequisite: BIOL 2401, BIOL 2402, RNSG 1115, 1105, 1301, 1413, 1262. Co-requisites: PSYC 2301.

RNSG 1347 Concepts of Clinical Decision-Making 2-3-3
Integration of previous knowledge and skills into the continued development of the professional nurse as a provider of care, coordinator of care, and member of the profession. Emphasis on clinical decision-making for clients in medical-surgical settings experiencing health problems involving gastrointestinal disorders, endocrine and metabolic disorders, reproductive and sexual disorders, musculoskeletal disorders eye-ear-nose-throat disorders and integumentary. Discussion of knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. The concepts of communication, caring, community, and critical thinking are used throughout the course. Prerequisites: PSYC 2301, RNSG 1251, 1331, 2213, 1363 or 1162 and 1327, OR 1417 and 2360, BIOL 2421. Co-requisites: PSYC 2314.

RNSG 1363 Clinical -Nursing II (RN Training) 0-18-3
An intermediate type of 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. This course includes clinical rotations in adult acute health care and maternity settings. The concepts of communication, caring, community and critical thinking are used throughout the course. Clinical education is an unpaid learning experience. Prerequisites: BIOL 2401, BIOL 2402, RNSG 1115, 1105, 1301, 1413, 1262. Co-requisites: RNSG 1331, 1251.

RNSG 1413 Foundations for Nursing Practice 3-3-4
Introduction to the role of the professional nurse as a provider of care, coordinator of care, and a member of the profession. Topics include but are not limited to the fundamental concepts of nursing practice, history of 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. The concepts of communication, caring, community, and critical thinking are included throughout the course. Prerequisite: BIOL 2401, ENGL 1301, RNSG 1209, BIOL 1406. Co-requisites: RNSG 1105, 1301, 1115, BIOL 2402.

RNSG 1417 Concepts of Nursing Practice I for Articulating Students 3-3-4
Provides the articulating student the opportunity to examine the role of the professional nurse; application of a systematic problem solving process and critical thinking skills which includes a focus on the adult population in selected settings; and competency in knowledge, judgment, skill, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. The concepts of communication, caring, community, and critical thinking are used throughout the course. Prerequisites: BIOL 2401, BIOL 2402, BIOL 2421, ENGL 1301, PSYC 2301, RNSG 1301, BIOL 1406. Co-requisites: RNSG 2213, 2360, 1251.

RNSG 2201 Care of Children and Families 1-3-2
Study of concepts related to the provision of nursing care for children and their families, emphasizing judgment, and professional values within a legal/ethical framework. The concepts of communication, caring, community, and critical thinking will be included throughout the course. This course lends itself to a blocked approach. Prerequisites: PSYC 2301, RNSG 1331, 1251, 2213, and 1363 or 1162 and 1327 or 1417 and 2360, BIOL 2421. Co-requisites: PSYC 2314.

RNSG 2213 Mental Health Nursing 1-3-2
Principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families. The concepts of communication, caring, community, and critical thinking will be included throughout the course. This course lends itself to a blocked approach. Prerequisites: BIOL 2401, BIOL 2402, RNSG 1115, 1105, 1301, 1413, 1262. Co-requisites: RNSG 1327 and 1162 or 1417 and 2360.

RNSG 2221 Management of Client Care 1-3-2
Exploration of leadership and management principles applicable to the role of the nurse as a provider of care, coordinator of care, and member of a profession. Includes application of knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. The concepts of communication, caring, community, and critical thinking will be included throughout the course. Prerequisites: RNSG 1347, 2201, 2362. Co-requisites: Humanities elective, and a KINE course.

RNSG 2331 Advanced Concepts in Adult Health 2-3-3
Application of advanced concepts and skills for the development of the professional nurse's roles with adult patients and families involving multiple body systems. Emphasis on advanced knowledge, judgment, skills and professional values within a legal/ethical framework. Prerequisite: RNSG 1347, 2201, 2362.

RNSG 2360 Clinical Nursing – for Articulating Students (RN training) 0-12-3
An intermediate health related work-based learning experience that enables the student who is a paramedic to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional in the care of adult clients in acute care settings. Clinical education is an unpaid learning experience. The concepts of communication, caring, community and critical thinking are used throughout the course. Prerequisites: BIOL 2401, BIOL 2402, BIOL 2421, ENGL 1301, PSYC 2301, RNSG 1301, BIOL 1406. Co-requisites: RNSG 2213, 1417, 1251.

RNSG 2362 Clinical - Nursing III (RN Training) 0-18-3
An intermediate type of 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. This course includes clinical rotations in adult acute health care, pediatric, and mental health care settings. Clinical education is an unpaid learning experience. The concepts of communication, caring, community and critical thinking are used throughout the course. Prerequisites: PSYC 2301, RNSG 1251, 2213, 1331, 1363, BIOL 2421, or RNSG 1162 and 1327, or 1417 and 2360. Co-requisites: RNSG 1347, 2201, PSYC 2314.

RNSG 2363 Clinical-Nursing IV (RN Training) 0-18-3
An advanced type of 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 in the care of adult clients in acute care settings. Clinical education is an unpaid learning experience. The concepts of communication, caring, community and critical thinking are used throughout the course. Prerequisites: RNSG 1347, RNSG 2201, RNSG 2362. Co-requisites: RNSG 2331, RNSG 2221, Humanities elective, KINE course.

RSTO Hospitality Management see also CHEF, HAMG, IFWA, PSTR and TRVM

RSTO 1204 Dining Room Service 1-3-2
Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel. American Hotel and Lodging Association (AH&LA) certification course. Student must attain a score of 70% or higher on certification test to receive National Certification.

RSTO 1221 Menu Management 2-0-2
A study of the food service principles involved in menu planning, layout, and evaluation for a variety of types of facilities and service methods. Emphasis on analysis of menu profitability, modification, commodity use, and other activities generated by the menu.

RSTO 1301 Beverage Management 3-0-3
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, service, and the selection of wines to enhance foods. American Hotel and Lodging Association (AH&LA) certification course. Student must attain a score of 70% or higher on certification test to receive National Certification.

RSTO 1313 Hospitality Supervision 3-0-3
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.

RSTO 1325 Purchasing for Hospitality Operations 3-0-3
Study of purchasing and inventory management of foods and other supplies to include development of purchase specifications, determination of order quantities, formal and informal price comparisons, 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.

RSTO 2301 Principles of Food and Beverage Controls 3-0-3
A study of financial principles and controls of food service operation including review of operation policies and procedures. Topics include financial budgeting and cost analysis emphasizing food and beverage labor costs, operational analysis, and international and regulatory reporting procedures.

RSTO 2307 Catering 2-2-3
Principles, techniques, and applications for both on-premises, off-premises, and group marketing of catering operations including food preparation, holding, and transporting techniques.

RSTO 2405 Management of Food Production and Service 2-4-4
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. Includes laboratory experiences in quantity food preparation and service.

RUSS Russian

RUSS 1411 Beginning Russian I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

RUSS 1412 Beginning Russian II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: RUSS 1411 with a grade of “C” or above.

RUSS 2311 Intermediate Russian I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisites: RUSS 1411 and 1412 with a grade of “C” or above.

RUSS 2312 Intermediate Russian II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: RUSS 2311 with a grade of “C” or above.

SCWK Mental Health Services see also CHLT, CMSW, DAAC and PSYT

SCWK 2301 Assessment and Case Management 2-4-3
Exploration of procedures to identify and evaluate an individual’s and/or family’s strengths, weaknesses, problems, and needs in order to develop an effective plan of action. Topics include oral and written communications essential for screening, assessment, and case management to determine the need for prevention, intervention, and/or referral. Prerequisites: CMSW 1309, DAAC 1319, PSYT 1329, PSYT 2321, PSYT 2331.

SOCI Sociology

SOCI 1301 Introduction to Sociology 3-0-3
Introduction to the concepts and principles used in the study of group life, social institutions, and social processes.

SOCI 1306 Social Problems 3-0-3
Application of sociological principles to the major problems of contemporary society such as inequality, crime and violence, substance abuse, deviance, or family problems.

SOCI 2301 Marriage and The Family 3-0-3
Sociological examination of marriage and family life. Problems of courtship, mate selection, and marriage adjustment in modern American society.

SOCI 2319 Minority Studies 3-0-3
This course studies minority-majority group relations, addressing their historical cultural, social, economic, and institutional development in the U.S.

SOCW Mental Health Services

SOCW 2361 Introduction to Social Work 3-0-3
This course explores the development of the philosophy and practice of social work in the United States, survey of the fields and techniques of social work.

SOCW 2362 Social Welfare as a Social Institution 3-0-3
Introduction to the study of modern social work, the underlying philosophy and ethics of social work, and the major divisions and types of social work together with their methods and objectives are explored.

SPAN Spanish

SPAN 1411 Beginning Spanish I 4-2-4
The study of basic Spanish grammar with the development of frequently used vocabulary. This course develops students' speaking, listening, reading and writing skills so they will be able to express their own ideas and interact with others. Some culture points are integrated to introduce students to the everyday lives of Spanish speakers in the twenty-one countries of the Spanish-speaking world.

SPAN 1412 Beginning Spanish II 4-2-4
The study of basic Spanish grammar and vocabulary development continued from the SPAN 1411 curriculum. Prerequisite: SPAN 1411 with a "C" or above.

SPAN 2311 Intermediate Spanish I 3-0-3
The study of grammar and vocabulary with emphasis on conversation and writing. This course will introduce students to Spanish culture and history as well as Latin American culture and history. Prerequisites: SPAN 1411 and SPAN 1412 with a "C" or above.

SPAN 2312 Intermediate Spanish II 3-0-3
The continuation of SPAN 2311. Emphasis on complex grammar, composition and conversation about Spanish American topics. Prerequisite: SPAN 2311 with a "C" or above.

SPCH Speech

SPCH 1144 Forensic Activities I 1-0-1
Study and practice of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments as a member of CTC's speech team.

SPCH 1145 Forensic Activities II 1-0-1
Study and practice of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments as a member of CTC's speech team.

SPCH 1315 Public Speaking 3-0-3
Course encompasses both theory and practice of communicating with others and includes research, composition, organization, and delivery of speeches for various purposes and occasions.

SPCH 1318 Interpersonal Communication 3-0-3
Theory, examples, and participation in exercises to improve effective one-to-one and small-group communication.

SPCH 1321 Business and Professional Communication 3-0-3
Theories and skills of speech communication as applied to business and professional situations. Includes participating in an interview, preparing a resume and cover letter, engaging in problem-solving discussions, and delivering public speeches.

SPCH 2144 Forensic Activities III 1-0-1
Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments as a member of CTC's speech team.

SPCH 2145 Forensic Activities IV 1-0-1
Study and practices of the nine individual speaking events that are commonly a part of forensic competition. Stresses research of subject matter, performance, and professionalism as a competitive speaker. Will include some travel to area forensic tournaments as a member of CTC's speech team.

SPCH 2341 Oral Interpretation 3-0-3
Study and practice in the principles of oral reading of literature. Stresses analyzing good literature and recreating the logical and emotional content for an audience. Also includes group oral interpretation.

TECA Child Development

TECA 1303 Families, School, & Community 3-1-3
A study of the child, family, community, and schools, including parent education and involvement, family and community lifestyles, child abuse, and current family life issues; course content is aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations; and course includes a minimum of 16 hours of field experiences.

TECA 1311 Educating Young Children 2-2-3
An introduction to the education of the young child, including developmentally appropriate practices and programs, theoretical and historical perspectives, ethical and professional responsibilities, and current issues; course content is aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations; course includes a minimum of 16 hours of field experiences.

TECA 1318 Wellness of the Young Child 3-1-3
A study of the factors that impact the well-being of the young child including healthy behavior, food, nutrition, fitness, and safety practices. Focus on local and national standards and legal implications of relevant policies and regulations; course content is aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; requires students to participate in field experiences with children from infancy through age 12 in a variety of settings with varied and diverse populations; course includes a minimum of 16 hours of field experiences.

TECA 1354 Child Growth & Development 3-0-3
This course is a study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.

TRVM Hospitality Management see also CHEF, HAMG, IFWA, PSTR and RSTO

TRVM 1300 Introduction to Travel and Tourism 3-0-3
An overview of the travel industry. Emphasis on travel careers and the impact of tourism on society.

TRVM 2301 Introduction to Convention/Meeting Management 3-0-3
Overview of the meetings and convention industry and the various aspects and skills involved in planning and managing meetings and conventions. Emphasis on types of meetings, meeting markets, industry suppliers, budget and program planning, site selection and contract negotiations, registration and housing, food and beverage requirements, function and meeting room setup, and audiovisual requirements. American Hotel and Lodging Association (AH&LA) certification course. Student must attain a score of 70% or higher on certification test to receive National Certification.

TURK Turkish

TURK 1411 Beginning Turkish I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

TURK 1412 Beginning Turkish II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: TURK 1411 with a grade of "C" or above.

TURK 2311 Intermediate Turkish I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisites: TURK 1411 and 1412 with a grade of "C" or above.

TURK 2312 Intermediate Turkish II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: TURK 2311 with a grade of "C" or above.

URDU Urdu

URDU 1411 Beginning Urdu I 4-2-4
This course includes basic grammar drill, pronunciation drill, simple reading, and conversation.

URDU 1412 Beginning Urdu II 4-2-4
Elementary grammar is completed. Pronunciation drill and reading-based conversation are continued. Common conversational phrases are stressed. Prerequisite: URDU 1411 with a grade of "C" or above.

URDU 2311 Intermediate Urdu I 3-0-3
This course includes grammar review, composition, and reading with conversation based on material read. Prerequisites: URDU 1411 and 1412 with a grade of "C" or above.

URDU 2312 Intermediate Urdu II 3-0-3
This course continues reading and drill on syntax as needed for reading, composition, and conversation. Prerequisite: URDU 2311 with a grade of "C" or above.

VNSG Nursing - LVN

VNSG 1116 Nutrition 1-0-1
Introduction to nutrients and the role of diet therapy in proper growth and development and in the maintenance of health. Prerequisites: VNSG 1222, 1323, 1227, 1136. Co-requisites: VNSG 1126, 1160, 2331, 1304, 1405.

VNSG 1126 Gerontology 1-0-1
Overview of the normal physical, psychosocial, and cultural aspects of the aging process. Addresses common disease processes of aging. Exploration of attitudes toward care of the elderly. Prerequisites: VNSG 1222 ,1227, 1304, 1323, 1405.

VNSG 1136 Mental Health 1-0-1
Introduction to the principles and theories of positive mental health and human behaviors. Topics include emotional responses, coping mechanisms, and therapeutic communication skills. Prequisites: VNSG 1126, 1222, 1227, 1304, 1323, 1405. Co-requisites: VNSG 1116, 1160, 2331.

VNSG 1160 Clinical - Practical Nurse I 0-6-1
An introductory 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. Clinical education is an unpaid learning experience. Prerequisites: VNSG 1323, 1222, 1227, 1136. Co-requisites: VNSG 1116, 1126, 2331, 1304, 1405.

VNSG 1219 Leadership and Professional Development 2-0-2
Study of the importance of professional growth. Topics include the role of the licensed vocational nurse in the multidisciplinary health care team, professional organizations, and continuing education. Prerequisites: Fall Admission VNSG 1323, 1304, 1405, 1227, 1222, 1136, 2331, 1126, 1116, 1160. Spring Admission VNSG 1330, 1334, 1400, 1360. Co-requisites: Fall Admission VNSG 1231, 1238, 1400, 1409, 1560. Spring Admission VNSG 1231, 1238, 1409, 1410, 1560.

VNSG 1222 Vocational Nursing Concepts 2-0-2
Introduction to the nursing profession and its responsibilities. Includes legal and ethical issues in nursing practice. Concepts related to the physical, emotional, and psychosocial self-care of the learner/professional. Co-requisites: VNSG 1323, 1227, 1136, 1304, 1405.

VNSG 1227 Essentials of Medication Administration 2-1-2
General principles of medication administration including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs. Instruction includes various systems of measurement. Co-requisites: VNSG 1323, 1222, 1136, 1304, 1405.

VNSG 1231 Pharmacology 2-0-2
Fundamentals of medications and their diagnostic, therapeutic, and curative effects. Includes nursing interventions utilizing the nursing process. Prerequisites: Fall Admission VNSG 1304, 1405, 1323, 1227, 1222, 1136, 2331, 1126, 1116, 1160. Spring Admission VNSG 1330, 1334, 1400, 1360. Co-requisites: Fall Admission VNSG 1231, 1219, 1400, 1409, 1560. Spring Admission VNSG 1231, 1219, 1409, 1410, 1560.

VNSG 1238 Mental Illness 2-0-2
Study of human behavior with emphasis on emotional and mental abnormalities and modes of treatment incorporating the nursing process. Prerequisites: Fall Admission VNSG 1304, 1405, 1323, 1227, 1222, 1136, 2331, 1126, 1116, 1160. Spring Admission VNSG 1330, 1334, 1400, 1360. Co-requisites: Fall Admission VNSG 1231, 1219, 1400, 1409, 1560. Spring Admission VNSG 1231, 1219, 1409, 1410, 1560.

VNSG 1304 Foundations of Nursing 2-1-3
Introduction to the nursing profession including history, standards of practice, legal and ethical issues, and role of the vocational nurse. Topics include mental health, therapeutic communication, cultural and spiritual diversity, nursing process, and holistic awareness. It also includes the health care system and documentation. Co-requisites: 1st 8 weeks VNSG 1222, 1227, 1136, 1323, 1405. Co-requisites: 2nd 8 weeks VNSG 2331, 1126, 1116, 1160, 1405.

VNSG 1323 Basic Nursing Skills 1-6-3
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. Co-requisites: VNSG 1222, 1227, 1136, 1405, 1304.

VNSG 1330 Maternal-Neonatal Nursing 3-0-3
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. Prerequisites: Fall Admission VNSG 1400, 1238, 1219, 1409, 1231, 1560. Spring Admission VNSG 1304, 1405, 1323, 1227, 1222, 1136, 2331, 1126, 1400, 1116, 1160. Co-requisites: Fall Admission VNSG 1360, 1334. Spring Admission VNSG 1360, 1334.

VNSG 1334 Pediatrics 2-2-3
Study of the care of the pediatric patient and family during health and disease. Emphasis on growth and developmental needs utilizing the nursing process. Prerequisites: Fall Admission VNSG 1400, 1238,1219, 1409, 1231, 1560. Spring Admission VNSG 1304, 1405, 1323, 1227, 1222, 1136, 2331, 1400, 1126, 1116, 1160. Co-requisites: Fall Admission VNSG 1360, 1330. Spring Admission VNSG 1360, 1330.

VNSG 1360 Clinical - Practical Nurse II 0-17-3
An intermediate/advanced 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. Clinical education is an unpaid learning experience. Prerequisites: Fall Admission VNSG 1160, 1560, 1304, 1405, 1323, 1227, 1222, 1136, 2331, 1126, 1116, 1400, 1409, 1238, 1231, 1219. Spring Admission VNSG 1160, 1304, 1405, 1323, 1227, 1222, 1136, 2331, 1126, 1116. Co-requisites: Fall Admission VNSG 1330, 1334, 1410. Spring Admission VNSG 1330, 1334, 1400.

VNSG 1400 Nursing in Health and Illness I 4-1-4
Introduction to general principles of growth and development, primary health care needs of the client across the lifespan, and therapeutic nursing interventions. Prerequisites: VNSG 1304, 1405, 1323, 1227, 1222, 1136, 2331, 1126, 1116, 1160. Co-requisites: Fall Admission VNSG 1560, 1238, 1231, 1219. Spring Admission VNSG 1360, 1330, 1334.

VNSG 1405 Health Science 3-2-4
An introduction to the general principles of anatomy and physiology, nutrition, and microbiology that are necessary for understanding body processes and basic principles underlying health promotion and therapeutic interventions. Co-requisites: 1st 8 weeks VNSG 1222, 1227, 1136, 1323, 1304. Co-requisites: 2nd 8 weeks VNSG 2331, 1126, 1116, 1160, 1304.

VNSG 1409 Nursing in Health and Illness II 3-2-4
Introduction to common health problems requiring medical and surgical interventions. Prerequisites: VNSG 1400, 1160. Co-requisites: VNSG 1560, 1238, 1219, 1231.

VNSG 1410 Nursing in Health and Illness III 3-2-4
Continuation of Nursing in Health and Illness II. Further study of common medical-surgical health problems of the client including concepts of mental illness. Incorporates knowledge necessary to make the transition from student to graduate vocational nurse. Prerequisite: VNSG 1409. Co-requisites: Fall Admission VNSG 1360, 1330, 1334. Spring Admission VNSG 1560, 1238, 1231, 1219.

VNSG 1560 Clinical - Practical Nurse II 0-25-5
An intermediate/advanced 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. Clinical education is an unpaid external learning experience. Course may be repeated if topics and learning outcomes vary. Prerequisites: Fall Admission VNSG 1160, 1304, 1405, 1323, 1227, 1222, 1136, 2331, 1126, 1116. Spring Admission VNSG 1160, 1360, 1330, 1334. Co-requisites: Fall Admission VNSG 1231, 1238, 1219, 1400, 1409. Spring Admission VNSG 1231, 1238, 1219, 1409, 1410.

VNSG 2331 Advanced Nursing Skills 1-6-3
Mastery of advanced level nursing skills and competencies in a variety of health care settings utilizing the nursing process as a problem-solving tool. Prerequisites: VNSG 1323, 1222, 1227, 1136. Co-requisites: VNSG 1116, 1160, 1126, 1304, 1405.

VNSG 2360 Clinical – Practical Nurse III 0-17-3
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. Capstone course.

VNSG 2560 Clinical – Practical Nurse III 0-25-5
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. Capstone course.

WDWK Maintenance Technology

WDWK 1413 Cabinet Making I 2-5-4
Design and construction of base cabinets and wall cabinets for kitchens and bathrooms. Emphasis on the safe use of portable and stationary power tools. Prerequisite: CRPT 1429 .

WDWK 2451 Cabinet Making II 3-3-4
Advanced skills in machine woodworking and hand craftsmanship. Emphasizes advanced design and door and drawer construction, laminate installation. Prerequisite: WDWK 1413.

WLDG Welding

WLDG 1313 Introduction to Blueprint Reading for Welders 2-4-3
A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes. Includes systems of measurement and industry standards. Also includes interpretation of plans and drawings used by industry to facilitate field application and production. Prerequisite: WLDG 1323.

WLDG 1323 Welding Safety, Tools, and Equipment 2-4-3
An introduction to welding careers, equipment and safety practices, including OSHA standards for industry.

WLDG 1417 Introduction to Layout and Fabrication 3-3-4
A fundamental course in layout and fabrication related to the welding industry. Major emphasis on structural shapes and use in construction.

WLDG 1425 Introduction to Oxy-Fuel Welding and Cutting 3-3-4
An introduction to oxy-fuel welding and cutting, safety, set up and maintenance of oxy-fuel welding, and cutting equipment and supplies. Prerequisite: WLDG 1323.

WLDG 1428 Introduction to Shielded Metal Arc Welding (SMAW) 3-3-4
An introduction to the shielded metal arc welding process. Emphasis is placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction provided in SMAW fillet welds in various positions. Prerequisites: WLDG 1323 and WLDG 1425.

WLDG 1430 Introduction to Gas Metal Arc (GMAW) Welding 3-3-4
Principles of gas metal arc (GMAW) welding, setup and use of GMAW equipment, and safe use of tools and equipment. Instruction in various joint designs. Prerequisites: WLDG 1323 and WLDG 1428.

WLDG 1434 Introduction to Gas Tungsten Arc (GTAW) Welding 3-3-4
Principles of gas tungsten arc welding (GTAW) including setup, and use of GTAW equipment. Instruction in various positions on joint designs. Prerequisites: WLDG 1323 and WLDG 1428.

WLDG 1435 Introduction to Pipe Welding 3-3-4
An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes. Prerequisite: WLDG 1457.

WLDG 1457 Intermediate Shielded Metal Arc Welding (SMAW) 3-3-4
A study of the production of various fillets and groove welds. Preparation of specimens for testing in various positions. Prerequisite: WLDG 1428.

WLDG 2413 Intermediate Welding Using Multiple Processes 2-7-4
Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shielded metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW) or any other approved welding process.

WLDG 2435 Advanced Layout and Fabrication 3-3-4
An advanced course in layout and fabrication. Includes production and fabrication of layout, tools, and processes. Emphasis on application of fabrication and layout skills. Prerequisite: WLDG 1417.

WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW) 2-7-4
Advanced topics based on accepted welding codes. Training provided with various electrodes in shielded metal arc welding processes with open V-groove joints in all positions. Prerequisites: WLDG 1323 and WLDG 1457.

WLDG 2447 Advanced Gas Metal Arc Welding (GMAW) 3-3-4
Advanced topics in gas metal arc welding (GMAW). Includes welding in various positions and directions. Prerequisite: WLDG 1430.

WLDG 2451 Advanced Gas Tungsten Welding (GTAW) 3-3-4
Advanced topics in GTAW welding, including welding in various positions and directions. Prerequisite: WLDG 1434.

WLDG 2453 Advanced Pipe Welding 2-7-4
Advanced topics involving welding of pipe using the shielded metal arc welding (SMAW) process. Topics include electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes. Prerequisite: WLDG 2406.

WLDG 2488 Internship - Welder/Welding Technology 0-19-4
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. Prerequisite: Department approval required.