



COURSE DESCRIPTIONS



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COURSE NUMBERS

Laredo Community College courses are numbered according to the format of the Texas Common Course Numbering System. Over 100 Texas colleges and universities belong to the System. This numbering system was developed for the purpose of facilitating the transfer of general academic courses. General academic courses are indicated by a ten-digit Coordinating Board (CB) number in the course description section of the catalog.

A four-letter prefix, as specified in the Guidelines of the Texas Common Course Numbering System, is used to identify the subject area. (Example: ENGL is English).

A four-digit number follows the prefix (Example: ENGL 1301).

The first digit specifies the level of the course: 0 is developmental, 1 is freshman, and 2 is sophomore.

The second digit identifies the credit-hour value of the course. (Example: ENGL 1301 is three hours.)

The third and fourth digits establish the course sequence. (Example: ENGL 1301, 1302).

All course descriptions (academic and technical) include a three-digit code in parenthesis following the number and title. The first digit in the series designates the semester hour value of the course; the second digit specifies the number of lecture hours the course meets per week; and the last digit indicates the number of laboratory hours per week.

TECHNICAL COURSES

The technical courses offered at LCC are approved by the Texas Higher Education Coordinating Board utilizing the CIP Codes. They do not have a ten-digit CB number as do academic courses.

These courses are numbered utilizing the same format as the Texas Common Course Numbering System; however, they are not listed as part of the Common Course System. They may have prefixes that are different from those specified by the Common Course System. Transferability of any of these courses is dependent upon the college or university of transfer (receiving institution).

DEPARTMENT OF INSTRUCTION AND COURSE ABBREVIATION

DEPARTMENT	DISCIPLINE(s)
Adult Education	ABE Adult Basic Education
	ESL English as a Second Language
	ASE Adult Secondary Education
	GED General Educational Development Diploma
Allied Health	EMSP Emergency Medical Services, Paramedic
	MDCA Medical Office Assisting
	MLAB Medical Laboratory Technology
	OTHA Occupational Therapy Assistant
	PTHA Physical Therapy Assistant
	RADR Radiologic Technology
	ARTS Art
Business and Technology	ACNT Applied Accounting
	ACCT Accounting
	POFT Applied Business
	BUSI Business Administration
	ECON Economics
Child Development/Early Childhood Education	CDEC Child Development
	EDTC Educational Assistant
	TECA Early Childhood Education Specialization
Computer Technology	EDUC Education
	BIOM Biomedical Technology/Technician
	CETT Computer Engineering Technology/Technician
	COSC Computer and Information Science
	CPMT Computer Technology/Computer Systems Technology
	DFTG CAD/CADD Drafting and/or Design Technology/Technician
	EECT Telecommunications Technology/Technician
	IMED Web Page, Digital/Multimedia and Information Resources Design
	INEW Web Page, Digital/Multimedia and Information Resources Design
	ITCC Computer Systems Networking and Telecommunications
ITMC Computer Systems Networking and Telecommunications	

	ITNW	Computer Systems Networking and Telecommunications
	ITSC	Computer and Information Sciences, General
	ITSE	Computer Programming/Programmer, General
	ITSW	Data Modeling/Warehousing and Database Administration
	LOTT	Laser and Optical Technology/Technician
	POFI	Business/Office Automation/Technology Data Entry
Community Education		Contract Training
		Non-Credit Instruction
Diesel Mechanics	DEMUR	Diesel Engine Mechanics and Repair
English	COMM	Communications
	ENGL	English
Foreign Languages	ENSL	English as a Second Language
	FREN	French
	SPAN	Spanish
Industrial Trades	HART	Heating Air Conditioning/Refrigeration
	ABDR	Autobody Collision & Repair Technology
	AUMT	Automotive Technology
	ELPT/ELTN	Electrical Technology
	MAIR	Major Appliance Installer and Repairer
	WLDG	Welding
Kinesiology	KINE	Physical Education
Management	IBUS	Import-Export Management
	BKNG	Management-Banking & Finance
	BMGT	Management
	OSHT	Occupational Safety & Health Technology
	RELE	Management-Real Estate
Mathematics	MATH	Mathematics
Music/Dance	DANC	Dance
	MUAP	Applied Music
	MUSI	Music
Nursing	RSNG	Associate Degree Nursing
	NURA	Nursing Assistant
	VNSG	Vocational Nursing
Protective Services	CRJ	Criminal Justice
	CJLE	Criminal Justice/Law Enforcement
	CJSA	Criminal Justice/Studies in Administration
	FIRT	Fire Technology
		Regional Police Academy
Reading	READ	Reading
Science	BIOL	Biology
	CHEM	Chemistry
	ENGR	Engineering
	GEOL	Geology
	PHYS	Physics
Social & Behavioral Sciences	ANTH	Anthropology
	GEOG	Geography
	GOVT	Government
	HECO	Home Economics
	HIST	History
	HUMA	Humanities
	PHIL	Philosophy and Logic
	PSYC	Psychology
	SOCI	Sociology
Speech & Drama	DRAM	Drama
	SPCH	Speech

The course descriptions include only the current number designation. For prior name and number designations, see Appendix A.

ACCOUNTING (ACCT)

ACCT 2401 Principles of Accounting I (4-4-2)

CB 5203015104

The study of financial accounting which entails the analysis and recording of business transactions, the recording of adjusting and closing entries, and the preparation of financial statements for sole proprietorships. The lecture method of instruction intermixed with a problem-solving lab is utilized. Highly recommended ACNT 1403 if no previous exposure to accounting.

ACCT 2402 Principles of Accounting II (4-4-2)

CB 5203015104

A continuation of Accounting 2401 through partnerships and corporations. Introduces accounting software through a computerized practice set. Emphasis on managerial accounting including budgets, cash flow, corporate structure analysis, income tax, investments, and operational and cost control. The lecture method of instruction intermixed with a problem-solving lab is utilized. Prerequisite: ACCT 2401.

ANTHROPOLOGY (ANTH)

ANTH 2346 General Anthropology CORE (3-3-0)

CB 4502015125

Principles of physical and cultural anthropology; analysis of the cultures of prehistoric and existing preliterate people; impact of modern western culture on preliterate societies. An introduction to the evolution and diversity, both physical and cultural, of present and past peoples.

ANTH 2351 Cultural Anthropology CORE (3-3-0)

CB 4502015325

Key concepts, methods and theory in the study of cultural diversity, social institutions, linguistics, and culture change among world people.

APPLIED ACCOUNTING (ACNT) (005821)

ACNT 1403 Introduction to Accounting I (formerly APAA 1411) (4-4-1)

A study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll.

ACNT 1404 Introduction to Accounting II (formerly APAA 1412) (4-4-1)

A study of accounting for merchandising, notes payable, notes receivable, valuation of receivables and equipment, and valuation of inventories in a manual and computerized environment. Prerequisite: ACNT 1403

ACNT 1411 Introduction to Computerized Accounting (formerly APAA 1465) (4-4-1)

Introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger. Prerequisite: ACNT 1403.

ACNT 1413	Computerized Accounting Applications (formerly APAA 1466)	(4-4-1)
	A study of utilizing the computer to develop and maintain accounting record keeping systems, make management decisions, and process common business applications with emphasis on utilizing a spreadsheet and/or data base package/program. Prerequisite: ACNT 1411.	
ACNT 1429	Payroll and Business Tax Accounting (formerly APAA 1402)	(4-4-0)
	A study of payroll procedures, taxing entities, and reporting requirements of local, state, and federal taxing authorities in a manual and computerized environment.	
ACNT 1431	Federal Income Tax: Individual (formerly APAA 1406)	(4-4-1)
	A study of the laws currently implemented by the IRS, providing a working knowledge of preparing taxes for the individual.	
ACNT 1491	Accounting Experience	CAPSTONE (4-4-1)
	Topics address recently identified current event, 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.	
ACNT 2404	Intermediate Accounting II (formerly APAA 1413)	(4-4-1)
	Continued in-depth analysis of generally accepted accounting principles underlying the preparation of financial statements including comparative analysis and statement of cash flow. Prerequisite: ACNT 1404.	
ACNT 2430	Governmental and Not-for-Profit Accounting	(4-4-1)
	Basic concepts and techniques of fund accounting, financial reporting for governmental and not-for-profit entities. Accounting cycle for funds, account groups and related financial statements.	
ACNT 2466	Accounting Practicum (formerly APAA 1401)	CAPSTONE (4-1-27)
	Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.	
POFI 1449	Spreadsheets	(4-4-0)
	In-depth coverage in the use of a spreadsheet software focusing on business applications.	

ART (ARTS)

Students interested in a four-year degree in art may earn half of the necessary art credits during the freshman and sophomore years at Laredo Community College. All art majors must consult an art department advisor prior to registration.

The letter grade "C" is the minimum prerequisite for majors and minors continuing studio courses in sequence. Some outstanding work by students may be retained by the college for educational and exhibition purposes.

ARTS 1301	Art Appreciation	CORE (3-3-0)
		CB 5007035126
	Exploration of purposes and processes in the visual arts, including evaluation of selected works.	

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ARTS 1303	Art History I	CORE	(3-3-0) CB 5007035226
	A survey of world painting, sculpture, architecture, and the minor arts from prehistoric times to the 14th century.		
ARTS 1304	Art History II	CORE	(3-3-0) CB 5007035226
	A survey of world painting, sculpture, architecture, and the minor arts from the 14th century to the present.		
ARTS 1311	Design I	CORE	(3-3-3) CB 5004015326
	The theory and practice of design. The fundamental principles and elements of design as related to two-dimensional visual structure. Special fee required.		
ARTS 1312	Design II	CORE	(3-3-3) CB 5004015326
	The theory and practice of design. The fundamental elements and principles of design in three-dimensional concepts. Special fee required.		
ARTS 1316	Drawing I	CORE	(3-3-3) CB 5007055226
	Freehand drawing using such media as pencil, charcoal, pen and ink. The illusion of volume and space through the use of perspective, line, and value is stressed. Special fee required.		
ARTS 1317	Drawing II		(3-3-3) CB 5007055226
	Continuation of ARTS 1316, with emphasis on personal expression. Prerequisite: ARTS 1316. Special fee required.		
ARTS 1325	Drawing and Painting for Non-Art Majors	CORE	(3-3-3) CB 5007085126
	Introduction to basic drawing and painting methods, techniques and concepts. Intended for the non-art major. Special fee required.		
ARTS 2306	Studies in Contemporary Art		(3-3-0) CB 5007035326
	An examination of current issues and practices in the visual arts. Historical influences, modern aesthetics, contemporary media, techniques, and individual concerns will be covered in lectures and research outside the traditional classroom.		
ARTS 2311	Design III		(3-3-3) CB 5004015326
	Color theory. An introduction to color as a descriptive and expressive element of art. Investigation into the properties of color through studio oriented design projects. Prerequisites: ARTS 1312, 1317. Special fee required.		
ARTS 2313	Design Communication I	CORE	(3-3-3) CB 5004015126
	An introduction to graphic design communication through visual strategies utilizing computers and digital imaging software. Special fee required.		

ARTS 2314	Design Communication II	(3-3-3) CB 5004015126
	Continuation of ARTS 2313 with emphasis on personal expression using advanced strategies using digital imaging. Prerequisite: ARTS 2313. Special fee required.	
ARTS 2316	Painting I	CORE (3-3-3) CB 5007085226
	An introduction to painting concepts, methods, and techniques using oils and acrylics. Special fee required.	
ARTS 2317	Painting II	(3-3-3) CB 5007085226
	Continuation of ARTS 2316, with emphasis on personal expression. Prerequisite: ARTS 2316. Special fee required.	
ARTS 2323	Life Drawing I	CORE (3-3-0) CB 5007055326
	Drawing from the human form in various media. Includes basic figure structure and a study of past and contemporary drawing. Special fee required.	
ARTS 2324	Life Drawing II	(3-3-3) CB 5007055326
	Continuation of ARTS 2323 with emphasis on personal expression. Prerequisite: ARTS 2323. Special fee required.	
ARTS 2326	Sculpture I	CORE (3-3-3) CB 5007095126
	An introduction and exploration of basic sculptural forms and techniques, including modeling, carving, and construction. Special fee required.	
ARTS 2327	Sculpture II	(3-3-3) CB 5007095126
	Continuation of ARTS 2326 with emphasis on personal expression and advanced techniques. Prerequisite: ARTS 2326. Special fee required.	
ARTS 2333	Printmaking I	CORE (3-3-3) CB 5007105126
	An introduction to and exploration of various printmaking techniques, including one-of-a-kind, relief, serigraph, intaglio, and lithography. Special fee required.	
ARTS 2334	Printmaking II	(3-3-3) CB 5007105126
	Continuation of ARTS 2333 with specialization and emphasis on personal expression. Prerequisite: ARTS 2333. Special fee required.	
ARTS 2341	Art Metals I	CORE (3-3-3) CB 5007135126
	An introduction to metal as a medium, jewelry design, basic fabrication and forming techniques. Special fee required.	
ARTS 2342	Art Metals II	(3-3-3) CB 5007135126
	Continuation of ARTS 2341 with emphasis on personal expression and experimentation with advanced techniques. Prerequisite: ARTS 2341. Special fee required.	

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ARTS 2346	Ceramics I	CORE	(3-3-3) CB 5007115126
	Introduction to ceramic processes, basic materials, techniques, hand building, glazing, firing procedures, and use of potter's wheel. Special fee required.		
ARTS 2347	Ceramics II		(3-3-3) CB 5007115126
	Continuation of ARTS 2346 with an emphasis on advanced projects in hand building, wheel throwing, and clay and glaze technology. Prerequisite: ARTS 2346. Special fee required.		
ARTS 2348	Digital Art I		(3-3-3) CB 5004025126
	Studio Art that explores the potential of the computer hardware and software medium for the visual, conceptual uses in visual art. Special fee required.		
ARTS 2349	Digital Art II		(3-3-3) CB 5004025126
	Continuation of Arts 2348 with emphasis on personal expression. Prerequisite: ARTS 2348. Special fee required.		
ARTS 2356	Photography I	CORE	(3-3-3) CB 5006055126
	An introduction to basic photographic methods and concepts, camera operation and black & white darkroom techniques. Special fee required.		
ARTS 2357	Photography II		(3-3-3) CB 5006055226
	Continuation of ARTS 2356, with emphasis on personal expression. Prerequisite: ARTS 2356. Special fee required.		
ARTS 2366	Watercolor I	CORE	(3-3-3) CB 5007085326
	An introduction to watercolor painting concepts, methods, and techniques. Special fee required.		
ARTS 2367	Watercolor II		(3-3-3) CB 5007085326
	Continuation of ARTS 2366 with emphasis on personal expression. Prerequisites: ARTS 2366. Special fee required.		

AUTOMOTIVE COLLISION REPAIR TECHNOLOGY (ABDR)

ABDR 1419	Basic Metal Repair		(4-2-6)
	Basic current metal working techniques, shop safety, proper tool usage, product application, and skill development utilizing various body features including metal principles.		
ABDR 1307	Auto Body Welding		(3-2-4)
	Fundamentals of automotive welding processes. Skill development in oxy/acetylene, stick arc, MIG, and cutting processes in a variety of applications.		

- ABDR 1431 Basic Refinishing (4-2-6)**
 An introduction to terms, trade practices, hand tools, power tools, current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Painting of trim and replacement parts included. Emphasis on surface preparation. Introduction to masking techniques.
- ABDR 1303 Vehicle Design and Structural Analysis (3-2-2)**
 An introduction to the collision repair industry with emphasis on safety, professionalism, and vehicle structural design.
- ABDR 1215 Vehicle Trim and Hardware (2-1-3)**
 An overview of glass removal and replacement and interior panel replacement. Introduction to interior and exterior trim removal and replacement. Special emphasis on padded and non-padded vinyl tops.
- ABDR 1541 Structural Analysis and Damage Repair I (5-3-6)**
 Skill development in the roughing and shaping procedures on automotive sheet metal necessary to make satisfactory minor body repairs. Emphasis on the alignment of component parts such as doors, hood, front-end assemblies, and deck lids.
- ABDR 1542 Structural Analysis and Damage Repair II (Capstone) (5-3-6)**
 Continuation of general repair and replacement procedures for damaged structural parts and collision damaged.
- ABDR 2449 Advanced Refinishing (4-2-6)**
 Skill development in multi-stage refinishing techniques. Further development identification of problems and solutions in color matching and partial panel refinishing.
- ABDR 2541 Major Collision Repair and Panel Replacement (5-3-6)**
 Instruction in preparation of vehicles for repair including removal and reinstallation of fenders, bumpers, trims, head and door liners, locks, handles, fascia, headers, doors, tailgates, deck lids, hatches, and hoods. Interpreting information from damage reports, planning repair sequences, selecting appropriate tools, and organizing removed parts for reinstallation are also included. Special emphasis on developing safe work habits.

AUTOMOTIVE TECHNOLOGY (AUMT) (006422)

- AUMT 1201 Introduction and Theory of Automotive Technology (2-2-0)**
 An introduction to the automobile industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, and automobile maintenance.
- AUMT 1281 Cooperative Education (2-1-8)**
 Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary.
- AUMT 1306 Automotive Engine Removal and Installation (3-2-4)**
 Fundamentals of engine inspection, removal and installation procedures.

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AUMT 1341	Heating and Air Conditioning Theory	(3-2-2)
	Theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis of system malfunctions. Includes manual and electronic climate control systems.	
AUMT 1407	Automotive Electrical Systems	(4-3-4)
	An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, and repair of batteries, charging and starting systems, and electrical accessories. Emphasis on electrical schematic diagrams and service manuals.	
AUMT 1410	Automotive Brake Systems	(4-3-4)
	Operation and repair of drum/disc type brake systems. Emphasis on safe use of modern equipment. Topics include brake theory, diagnosis, and repair of power, manual, anti-lock brake systems, and parking brakes.	
AUMT 1416	Suspension and Steering	(4-3-4)
	Theory and operation of automotive suspension and steering systems including tire and wheel problem diagnosis, component repair, and alignment procedures.	
AUMT 1419	Automotive Engine Repair	(4-2-4)
	Fundamentals of engine operation, diagnosis and repair including lubrication systems and cooling systems. Emphasis on overhaul of selected engines, identification and inspection, measurements, and disassembly, repair, and reassembly of the engine.	
AUMT 1445	Automotive Heating and Air Conditioning	(4-3-4)
	Theory of automotive air conditioning and heating systems. Emphasis on the basic refrigeration cycle and diagnosis and repair of system malfunctions. Covers EPA guidelines for refrigerant handling and new refrigerant replacements.	
AUMT 2328	Automotive Service	CAPSTONE (3-2-4)
	Mastery of automotive vehicle service and component systems repair. Emphasis on mastering current automotive competencies covered in related theory courses.	
AUMT 2413	Manual Drive Train and Axles	(4-3-4)
	A study of automotive clutches, clutch operation devices, standard transmissions, transaxles, and differentials with emphasis on the diagnosis and repair of transmissions and drive lines.	
AUMT 2417	Engine Performance Analysis I	(4-3-4)
	Theory, operation, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Use of basic engine performance diagnostic equipment.	
AUMT 2421	Automotive Electrical Lighting and Accessories	(4-3-4)
	Repair automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques.	
AUMT 2425	Automatic Transmission and Transaxle	(4-3-4)
	A study of the operation, hydraulic principles, and related circuits of modern automatic transmission and automatic transaxles. Diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and proper repair techniques.	

AUMT 2434 Engine Performance Analysis II (4-3-4)
 Diagnosis and repair of emission systems, computerized engine performance systems and advanced ignition and fuel systems, and proper use of advanced engine performance diagnostic equipment.

AUMT 2437 Automotive Electronics (4-3-4)
 Topics address electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology.

BANKING AND FINANCE (BNKG) (005626)

BNKG 1301 Money and Banking (3-3-0)
 Survey of the role of monetary policy and related effects upon financial intermediaries. Overview of financial markets, regulatory functions, and structures. Description of investments and funds management.

BNKG 1303 Principles of Bank Operation (3-3-0)
 Overview of the fundamental banking functions and the role of regulation in the banking industry. Explanation of financial products and services to various markets.

BNKG 1305 Teller Training (3-3-0)
 Application of the functions related to negotiable instruments, cash control, handling money, and balancing. Explanation of compliance and regulation issues affecting bank tellers.

BNKG 1343 Law and Banking (3-3-0)
 An introduction to basic sources of law and banking regulation. Emphasis on the laws relating to contracts, negotiable instruments, secured transactions, and consumer credit.

BNKG 1345 Consumer Lending (3-3-0)
 A study of the different types of consumer loans. Identify the federal regulations and state laws pertaining to collection and serving of a consumer loan and relate consumer credit to the lending process.

BNKG 1347 Bank Marketing CAPSTONE (3-3-0)
 Principles of marketing as they relate to the banking industry. Special emphasis on deposit, credit, and payment related products. Pricing, promotion, product, and distribution strategies as used within the financial industry are included.

BNKG 1349 Commercial Lending (3-3-0)
 Overview of the commercial lending market and process. Emphasis on credit analysis, evaluation, federal regulations, and state laws related to business and industrial lending.

BNKG 1351 Selling Bank Products and Services (3-3-0)
 Characteristics and benefits of bank products and services. Emphasis on the personal selling process and quality customer service. Application of personal selling, cross-selling, and related product benefits to individual customer needs.



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BNKG 1353	Mortgage Lending		(3-3-0)
	Overview of the mortgage lending market and process. Emphasis on documentation, credit evaluation, federal regulation, and state laws related to mortgage loans.		
BNKG 1356	Analyzing Financial Statements		(3-3-0)
	A study of the process of evaluating financial statements, cash flow, and ratio analysis of individuals and businesses. Emphasis on the relationship of comparative analysis and industry standards.		
BNKG 1466, 1467	Practicum (or Field Experience)		
	Banking and Financial Support Services	CAPSTONE	(4-1-27)
	Practical general workplace training supported by an individualized learning plan developed by the employer, college, and student.		
IBUS 2339	International Banking and Finance		(3-3-0)
	A course in international monetary financial markets, flow of capital, foreign exchange, and financial institutions. Topics include export-import payments and financing, preparation of letters of credit, related shipping documentation, and electronic transfers. An introduction to multi-national financial decisions such as financing foreign investment or working capital.		

BIOLOGY (BIOL)

BIOL 1322	Nutrition and Diet Therapy I		(3-3-0)
		CB 1905015109	
	This course covers concepts such as measurement of the diet, nutrients in body function, and nutrition throughout the life cycle. It includes nutrient functions, food sources, digestion, absorption, and metabolism with applications to normal and special conditions such as weight management, pregnancy, infancy, childhood, adolescence, aging, and therapeutic nutritional needs. Prerequisites: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314.		
BIOL 1406	Biology for Science Majors I	CORE	(4-3-3)
		CB 2601015103	
	This is a course in General Biology for science majors, including the consideration of chemistry and physics as applied to biology. Topics included are cytology, biochemistry, genetics, photosynthesis, cellular respiration, and a survey of the Earth's organisms. Prerequisites: High school chemistry or concurrent enrollment or credit in CHEM 1405, 12th grade reading level and eligibility for ENGL 1301 and credit for or concurrent enrollment in MATH 1314. Concurrent enrollment in CHEM 1411 is strongly recommended. Fall, Spring.		
BIOL 1407	Biology for Science Majors II	CORE	(4-3-3)
		CB 2601015103	
	This course is the continuation of BIOL 1406. Emphasis is on evolution, comparative survey of plant and animal organ systems, and ecological principles. Prerequisite: BIOL 1406. Fall, Spring.		
BIOL 1408	Biology for Non-Science Majors I	CORE	(4-3-2)
		CB 2601015103	
	This course is an introductory general biology course recommended for students not majoring in the sciences. Topics include cells and cell chemistry, genetics, and a survey of the diversity of living organisms. Prerequisites: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Fall, Spring.		

BIOL 1409	Biology for Non-Science Majors II	CORE	(4-3-2) CB 2601015103
	<p>This course is a continuation of BIOL 1408. It is recommended for students not majoring in the sciences. Topics include structure and function of plant systems; structure and function of animal systems, including humans; evolution; ecology and behavior. Prerequisite: Credit for BIOL 1408. Fall, Spring.</p>		
BIOL 1410	Survey of Life Science		(4-3-3) CB 2601015103
	<p>This course is a basic introduction stressing fundamental biological principles and concepts. It is designed to acquaint students with the various structures, functions, life histories, distribution and interactions of plants, animals and microorganisms. This course is required for elementary education certification for students transferring to TAMU. It may fulfill four of the eight or 12 hours of science requirements for some degree plans (check with your advisor and/or college of transfer). It is not for students majoring or minoring in science. It is a one semester alternative to the two semester Introduction to Biology series (BIOL 1408/1409). Credit will be awarded for either BIOL 1410 or for BIOL 1408/1409, but not for all three courses. Prerequisites: 12th grade reading level and eligibility for ENGL 1301 and MATH.</p>		
BIOL 1411	General Botany	CORE	(4-3-3) CB 2603015103
	<p>This course is a survey of plants with emphasis on organization, life cycles, evolution, and ecology. It provides a foundation for advanced studies in the biological and agricultural sciences. Prerequisite: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Fall.</p>		
BIOL 1413	General Zoology	CORE	(4-3-3) CB 2607015103
	<p>This course is a comprehensive treatment of the invertebrate and chordate animals with emphasis on their morphology, physiology, evolution, and natural history. It provides a foundation for advanced studies in the biological sciences. Prerequisite: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Spring.</p>		
BIOL 2106	Environmental Biology Laboratory	CORE	(1-0-3) CB 0301035101
	<p>This is a laboratory course which emphasizes environmental sampling techniques and their relationships to managing environmental problems. Prerequisites: Credit for or concurrent enrollment in BIOL 2306, 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Spring.</p>		
BIOL 2306	Environmental Biology	CORE	(3-3-0) CB 0301035101
	<p>This course is an introduction to our interaction with the earth's ecosystems, ecological problems, human structure, function and environmental-induced disorders. Human impact on the environment will be emphasized, including the necessary measures for environmental remediation. Prerequisites: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Spring.</p>		
BIOL 2389	Academic Cooperative in the Biological Sciences/Life Sciences		(3-2-3) CB 2601015203
	<p>On-campus study with practical hands-on experiences in life sciences. In conjunction with class seminars, the student will set specific goals and objectives to enhance understanding of biological problems. Topics may include health, aging, environment, evolution, biotechnology and others. To Be Arranged.</p>		

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BIOL 2401	Anatomy and Physiology I	CORE	(4-3-4) CB 2607075103
	This course is designed to present an integrated view of the structure and function of human systems. Emphasis is placed on student comprehension of the interaction of cells, tissues, organs, and systems in maintaining organism homeostasis. The systems covered include: integumentary, skeletal, muscular, and nervous systems. Prerequisites: High School Chemistry and Biology, 12th grade reading level, and eligibility for ENGL 1301 and MATH 1314. A strong background in concepts of cell and molecular biology is recommended. (See BIOL 1308). Fall, Spring, Summer.		
BIOL 2402	Anatomy and Physiology II	CORE	(4-3-4) CB 2607075103
	This is a continuation of the study of human anatomy and physiology. This course includes a detailed study of the autonomic nervous system, the special senses and the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. Consideration is also given to immunity, metabolism, nutrition, fluids, electrolytes, acid-base dynamics, growth, development and inheritance. Prerequisite: a grade of "C" or better in BIOL 2401. Fall, Spring, Summer.		
BIOL 2404	Anatomy and Physiology (Kinesiology Majors)	CORE	(4-3-3) CB 2607075103
	A survey of the basic anatomy and functioning of systems of the human body, including cells, tissues, musculoskeletal, reproductive, circulatory, respiratory, immune, nervous, endocrine, urinary, and digestive systems. Not for students majoring or minoring in biology. Fall, Spring.		
BIOL 2416	Genetics		(4-3-4) CB 2608045103
	The study of the principles of molecular and classical genetics and the function and transmission of hereditary material. Topics may include population genetics and genetic engineering. Prerequisite: BIOL 1407. Spring.		
BIOL 2421	Microbiology for Science Majors		(4-3-4) CB 2605035103
	This course is a survey of the biology of microorganisms including protozoa, algae, fungi, bacteria, and viruses. Topics included are life histories, structure and function of microorganisms, their roles in the environment, and applied microbiology (medical, food, and industrial). One of the following conditions must be met for entrance into this course: 1. One year of college biology and credit for or concurrent enrollment in CHEM 2423. 2. Credit in BIOL 2401 and 2402. Fall & Spring.		
BIOL 2428	Vertebrate Zoology		(4-3-4) CB 2607015303
	This course covers the genetic and environmental mechanisms of organic evolution; it is a morphological and phylogenetic study of selected vertebrates. Prerequisite: Credit for 6 semester hours of college biology. Spring.		

BUSINESS ADMINISTRATION (BUSI)

- BUSI 1301 Introduction to Business (3-3-0)**
CB 5201015104
 A course designed to survey the entire field of business, to provide a background for further study, and to aid the student in selecting a field of vocational specialization. Special emphasis is placed on the major divisions of a business concern, finance, production, sales, and personnel.
- BUSI 1307 Personal Finance (3-3-0)**
CB 1904015109
 Study of financial problems encountered as a student and in managing a family unit. Includes financial planning, insurance, expenditures, budgeting, wise use of credit, home ownership, savings, investment, taxes, and Social Security benefits.
- BUSI 1311 Salesmanship (3-3-0)**
CB 0807065104
 A course in general salesmanship involving the factors of successful selling of goods and ideas. Buying motives, sales psychology, customer approach and sales techniques are studied.
- BUSI 2301 Business Law (3-3-0)**
CB 2201015124
 An introduction of law in business and society, including contracts, agency law, community property, uniform commercial code, and applicable Texas statutes.

CHEMISTRY (CHEM)

- CHEM 1405 Introductory Chemistry I CORE (4-3-3)**
CB 4005015103
 This is a survey course covering the elementary topics in general chemistry: atomic theory, bonding, states of matter, solutions, nuclear reactions, and pollution. It is designed for students who do not plan to take upper division chemistry courses, or who did not take chemistry in high school. Prerequisite: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Fall.
- CHEM 1406 Introductory Chemistry I CORE (4-3-3)**
(Nursing/Allied Health Majors) CB 4005015103
 This is a comprehensive lecture and laboratory course intended for non-science majors and particularly those desiring careers in nursing and allied health-care fields. In this course the fundamentals of general, organic, and biochemistry are covered from a practical viewpoint. The course consists of basic concepts in chemistry and cellular biochemistry associated with carbohydrate, protein, and lipid metabolism; enzyme studies; electrolyte, pH and blood gas analysis, hormone studies. Diagnosis implications will also be discussed. Prerequisites: High School Chemistry or any college level science course and eligibility for Math 1314 and ENGL 1301.
- CHEM 1407 Introductory Chemistry II CORE (4-3-3)**
CB 4005015103
 This course is a continuation of CHEM 1405. It covers the properties of the elements and compounds; an introduction to electrochemistry, organic chemistry, biochemistry, agricultural chemistry, and polymer chemistry. Prerequisite: CHEM 1405 or college level science course. Spring.

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CHEM 1411 General Chemistry I CORE (4-3-4)
CB 4005015203

This course is a study of the fundamental laws of chemistry, electronic structure of matter, periodic classification, chemical bonding, acids, bases, salts, and quantitative relationships of matter and of energy. Prerequisites: Concurrent enrollment or credit in ENGL 1301 and MATH 1314 and high school chemistry or CHEM 1405. Fall, Spring, Summer I.

CHEM 1412 General Chemistry II CORE (4-3-4)
CB 4005015203

This course is a continuation of general chemistry. It covers solution chemistry, oxidation and reduction, electrochemistry, molecular equilibrium and a study of ionization and ionic equilibrium. The laboratory is a systematic study of qualitative analysis and the applications of equilibrium principles to chemical systems. Prerequisite: CHEM 1411. Fall, Spring, Summer II.

CHEM 2389 Academic Cooperative in Chemistry (3-2-3)
CB 4001015303

The course involves practical hands-on research experience in chemistry. This will be accomplished by a cooperative work experience in a university, industrial, medical, or government facility working with trained scientists to solve a research problem in chemistry. Prerequisite: CHEM 1412.

CHEM 2401 Analytical Chemistry I (4-2-6)
CB 4005025103

This course is a one semester course covering both the theory and practice of inorganic quantitative analysis. Both gravimetric and volumetric analysis will be discussed, as well as elementary instrumentation. The laboratory section will consist of experiments illustrating gravimetric, volumetric, and instrumental methods of analysis. Prerequisite: CHEM 1412. To Be Arranged.

CHEM 2423 Organic Chemistry I (4-3-4)
CB 4005045203

This course is for students majoring in chemistry, chemical engineering, pharmacy, premedicine, dentistry or veterinary medicine. It is an intensive introduction to organic chemistry, structures, reaction mechanisms, and syntheses. Prerequisite: CHEM 1412. Fall.

CHEM 2425 Organic Chemistry II (4-3-4)
CB 4005045203

This course is a continuation of CHEM 2423, with an introduction to spectrometry. Prerequisite: CHEM 2423. Spring.

CHILD DEVELOPMENT (CDEC) (005222)

CDEC 1100 Laboratory Experience: Child Growth and Development (1-0-3)

A laboratory experience to provide the student with the opportunity to develop practical learning experiences that will foster development in young children within theoretical constructs. Co-requisite: TECA 1354.

- CDEC 1313 Curriculum Resources for Early Childhood Programs (3-2-2)**
 A study of the fundamentals of curriculum design and implementation in developmentally appropriate programs for children. Fall only.
- CDEC 1321 The Infant and Toddler (3-3-0)**
 A study of appropriate infant and toddler programs (birth to 3 years), including an overview of development, quality caregiving routines, appropriate environments, materials and activities and teaching/guidance techniques. Fall.
- CDEC 1356 Emergent Literacy for Early Childhood (3-3-0)**
 An exploration of principles, methods, and materials for teaching young children language and literacy through a play-based integrated curriculum. Spring only.
- CDEC 1358 Creative Arts for Early Childhood (3-2-2)**
 An exploration of principles, methods, and materials for teaching young children music, movement, visual arts, and dramatic play through process-oriented experiences to support divergent thinking. Prerequisite: CDEC 1313 (or concurrent enrollment). Fall.
- CDEC 1359 Children with Special Needs (3-3-0)**
 A survey of information regarding children with special needs including possible causes and characteristics of exceptionalities, intervention strategies, available resources, referral processes, the advocacy role, and legislative issues.
- CDEC 1419 Child Guidance (4-3-3)**
 An exploration of guidance strategies for promoting prosocial behaviors with individual and groups of children. Emphasis on positive guidance principles and techniques, family involvement and cultural influences. Practical application through direct participation with children. Malpractice insurance fee is required. Prerequisites: Capstone course to be taken during freshman year second semester and CDEC 1454/TECA 1354.
- CDEC 1457 Math and Science for Early Childhood (4-3-3)**
 An exploration of principles, methods, and materials for teaching children math and science concepts through discovery and play. Prerequisites: CDEC 1313 (or concurrent enrollment) and CDEC 1419. Malpractice insurance fee required. Fall only.
- CDEC 2326 Administration of Programs for Children I (3-3-0)**
 A practical application of management procedures for early child care education programs, including a study of planning, operating, supervising, and evaluating programs. Topics on philosophy, types of programs, policies, fiscal management, regulations, staffing, evaluation, and communication. Prerequisite: Sophomore standing in CDEC or approval of program coordinator. Spring.
- CDEC 2422 Child Development Associate Training II (4-3-4)**
 A continuation of the study of the requirements for the Child Development Associate National Credential (CDA). The six functional areas of study include safe, healthy, learning environment, self, social and guidance. Prerequisites: Must be a teacher or a teacher aide employed in an approved Child Care Center. Malpractice insurance fee required. Fall.

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- CDEC 2424** **Child Development Associate Training III** **(4-3-4)**
Continuation of the requirements for the Child Development Associate National Credential (CDA). Three of the 13 functional areas of study include family, program management and professionalism. Prerequisites: Must be a teacher or a teacher aide employed in an approved Child Care Center. Malpractice insurance fee required. Spring.
- CDEC 2486** **Internship-Child Development and Early Childhood** **(4-2-10)**
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: Capstone course - to be taken during sophomore year second semester and CDEC 1457. Malpractice insurance fee required. Spring.

EARLY CHILDHOOD EDUCATION (EDUC)

- EDUC 1301** **Introduction to the Teaching Profession** **(3-3-1)**
CB 1301015109
An enriched integrated pre- service course and content experience that: 1). Provides active recruitment and institutional support of students interested in a teaching career, especially in high needs 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; course must include a minimum of 16 contact hours of field experience in P-12 classrooms.
- EDUC 2301** **Introduction to Special Populations** **(3-3-1)**
CB 1310015109
An enriched pre- service course and content experience that: 1). 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; 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 with special populations. Prerequisite for this course is EDUC 1301.

EARLY CHILDHOOD EDUCATION SPECIALIZATION (TECA)

- TECA 1303** **Family, School and Community** **(3-3-1)**
CB 1301015209
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.
- TECA 1311** **Educating Young Children** **(3-3-1)**
CB 1312025109
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.

- TECA 1318 Wellness of the Young Child (3-3-1)**
CB 1301015309
 A study of nutrition, health, and safety including community health, universal health precautions, and legal implications. Practical application of these principles in a variety of settings.
- TECA 1354 Child Growth and Development (3-3-0)**
CB 1312025209
 A study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence.

COMPUTER DRAFTING AND DESIGN TECHNOLOGY (DFTG)

- DFTG 1305 Technical Drafting (3-1-8)**
 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 process.
- DFTG 1309 Basic Computer-Aided Drafting (3-1-8)**
 An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinate systems, and plot/print to scale.
- DFTG 1317 Architectural Drafting-Residential (3-2-4)**
 Architectural drafting procedures, practices, and symbols. Preparation of detailed working drawings for residential structures. Emphasis on light frame construction methods. Prerequisite: DFTG 1309.
- DFTG 1333 Mechanical Drafting (3-2-4)**
 Detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common fasteners, pictorial drawings, including bill of materials. Prerequisite: DFTG 1305 and DFTG 1309.
- DFTG 1358 Electrical/Electronics Drafting (3-2-4)**
 Electrical and electronic drawings, stressing modern representation used for block diagrams, schematic diagrams, logic diagrams, wiring/assembly drawings, printed circuit board layouts, motor control diagrams, power distribution diagrams, and electrical one-line diagrams. Prerequisite: DFTG 1309.
- DFTG 2305 Printed Circuit Board Design (3-2-4)**
 Course including single-sided and double-sided printed circuit board design, emphasizing the drawings, standards, and processes required to layout printed circuit board and manufacturing documentation. Prerequisite: DFTG 1358
- DFTG 2306 Machine Design (3-1-6)**
 Theory and practice of design. Projects in problem-solving, including press fit, bolted and welded joints, and transmission components. Prerequisite: DFTG 2319 & DFTG 2332.
- DFTG 2312 Technical Illustration and Presentation (3-2-4)**
 Pictorial drawing including isometrics, obliques, perspectives, charts, and graphs. Emphasis on rendering and using different media. Prerequisite: DFTG 2340.

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DFTG 2319	Intermediate Computer Aided Drafting	(3-2-4)
	A continuation of practices and techniques used in basic computer-aided drafting emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, construction of 3 dimensional drawings, interfacing 2d and 3d environments and extracting data. Prerequisite: DFTG 1309. (Formerly DFTG 1372)	
DFTG 2321	Topographical Drafting	(3-2-4)
	Plotting of surveyors field notes. Includes drawing elevations, contour lines, plan and profiles, and laying out traverses. Prerequisite: DFTG 2330.	
DFTG 2328	Architectural Drafting-Commercial	(3-2-4)
	Architectural drafting procedures, practices, and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods. Prerequisite: DFTG 1309 and DFTG 1317.	
DFTG 2330	Civil Drafting	(3-2-4)
	An in-depth study of drafting methods and principles used in civil engineering. Prerequisite: DFTG 1309. (Formerly DFTG 1373)	
DFTG 2332	Advanced Computer-Aided Drafting	CAPSTONE (3-2-4)
	Advanced techniques, including the use of a customized system. Presentation of advanced drawing applications, such as three-dimensional modeling and linking graphic entities to external non-graphic data. Prerequisites: DFTG 2319 and DFTG 2340.	
DFTG 2340	Solid Modeling/Design	(3-2-4)
	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. Prerequisites: DFTG 2319.	
DFTG 2344	Strength of Materials	(3-2-4)
	The study of internal effects of forces acting upon elastic bodies and the resulting changes in form and dimensions, including units on stress, shear, bending moments, and simple beam design. Prerequisites: Math 1316.	
DFTG 2348	Plane Surveying	(3-2-4)
	Plane surveying includes use of surveying instruments, basic measuring procedures, vertical and horizontal control, and traverse closure. Prerequisites: Math 1316.	
DFTG 2350	Geometric Dimensioning and Tolerancing	(3-2-4)
	Geometric dimensioning and tolerancing, according to standards, application of various geometric dimensions and tolerances to production drawings. Prerequisites: DFTG 1333 and DFTG 2332.	

**ELECTRONICS TECHNOLOGY
COMPUTER ELECTRONICS (ETEC) (008824)**

The Electronics Technology program is designed to give the students a strong electronic background through the application of theory and practice in a hands-on environment. The students have the option to select one or both of the two different ETEC programs.

BIOM 1309	Applied Biomedical Equipment Technology Introduction to biomedical instrumentation as related to anatomy and physiology. Detailed coverage of anatomical systems that use medical equipment for monitoring, diagnosis, and treatment. Prerequisites: CETT 1341, CETT 1409 and CETT 1449	(3-3-2)
BIOM 2331	Biomedical Clinical Instrumentation A study of theory, application, and principles of operation of instruments commonly used in a medical laboratory. Prerequisites: BIOM 1309, CPMT 1403, and CPMT 1411	(3-3-2)
CETT 1341	Solid State Circuits A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis. (Formerly ETEC 1323) Prerequisite: CETT 1429	(3-3-1)
CETT 1403	DC Circuits 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. (Formerly ETEC 1411)	(4-4-1)
CETT 1405	AC Circuits A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. (Formerly ETEC1421) Prerequisite: CETT 1403	(4-4-1)
CETT 1409	DC-AC Circuits 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.	(4-4-1)
CETT 1425	Digital Fundamentals 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. (Formerly ETEC 1412)	(4-3-3)
CETT 1429	Solid State Devices A study of diodes, transistor characteristics and other semiconductor devices, including analysis of static and dynamic characteristics, biasing techniques, and thermal considerations. (Formerly ETEC 1422) Prerequisite: CETT 1409	(4-4-1)
CETT 1445	Microprocessor An introductory course in microprocessor software and hardware: architecture, timing sequence, operation, and programming. Discussion of appropriate software diagnostic language and tools. (Formerly ETEC 1413) Prerequisite: Concurrent enrollment in CETT 1425	(4-4-1)
CETT 1449	Digital Systems 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. (Formerly ETEC 1432) Prerequisite: CETT 1425.	(4-4-1)

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- CETT 1457 Linear Integrated Circuits (4-3-2)**
A study of the characteristics, operations, stabilization, testing, and feedback techniques of linear integrated circuits. Application in computation, measurements, instrumentation, and active filtering. (Formerly ETEC 2486) Prerequisite: Consent of Instructor.
- CETT 1491 Special Topics in Computer Engineering Technology/Technician (4-3-2)**
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. (Formerly ETEC 2485) Prerequisite: Consent of Instructor. This course was designed to be repeated multiple times to improve student proficiency.
- CETT 2281 Cooperative Education - Computer Engineering (2-1-10)**
Technology/Technician CAPSTONE
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (Formerly ETEC 2290) Prerequisites: CETT 1341, CETT 1449, CPMT 1403 and CPMT 1411.
- CETT 2435 Advanced Microprocessors (4-4-1)**
An advanced course utilizing the microprocessor in control systems and interfacing. Emphasis on microprocessor hardware and implementation of peripheral interfacing. (ETEC 1442) Prerequisites: CETT 1429, CETT 1445, CETT 1449 and concurrent enrollment in CPMT 1403.
- CPMT 1403 Introduction to Computer Technology (4-4-1)**
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. (Formerly ETEC 1431).
- CPMT 1411 Introduction to Computer Maintenance (4-4-1)**
An introduction to the installation, configuration, and maintenance of a microcomputer system. (Formerly ETEC 2452).
- CPMT 1447 Computer System Peripherals (4-3-2)**
Theory and practices involved in computer peripherals, operation and maintenance techniques, and specialized test equipment. (Formerly ETEC 2453) Prerequisite: CPMT 1411.
- CPMT 1449 Computer Networking Technology (4-4-1)**
Networking fundamentals, terminology, hardware, software, and network architecture. Includes local/wide area networking concepts and networking installations and operations. (Formerly ETEC 2463) Prerequisite: CPMT 1403.
- CPMT 2445 Computer System Troubleshooting (4-3-3)**
Principles and practices involved in computer system troubleshooting techniques and repair procedures including advanced diagnostic test programs and the use of specialized test equipment. (Formerly ETEC 2462) Prerequisite: CPMT 1403, CPMT 1411, and CPMT 1449.

- CPMT 2449 Advanced Computer Networking Technology (4-4-1)**
 Network technology with emphasis on network operating systems, network connectivity, hardware, and software. Includes implementation, troubleshooting, and maintenance of LAN and/or WAN network environments. Prerequisite: CPMT 1449.
- EECT 1402 Introduction to Videoconferencing (4-3-2)**
 An introduction to the videoconferencing protocol. Topics include imaging, display and control equipment. Prerequisites: CPMT 1403, CPMT 1411, CPMT 1447, CPMT 1449.
- EECT 2433 Telephone Systems (4-3-2)**
 A study of installation and maintenance systems including telephone set, public switched networks, local exchanges, networks, two and four wire systems, tip and ringing requirements, and digital transmission techniques. (Formerly ETEC 2482) Prerequisite: CETT 1429.
- EECT 2435 Telecommunications (4-3-2)**
 A study of modern telecommunications systems incorporating microwave, satellite, optical, and wire/cable-based communications systems. Instruction in installation, testing, and maintenance of communications systems components. (Formerly ETEC 2481) Prerequisite: CETT 1425 and CETT 1429
- LOTT 1401 Introduction to Fiber Optics (4-4-1)**
 An introductory course in fiber optics and its application including advantages of fiber, light transmission in fiber, types of fiber, sources, detectors, and connectors. Prerequisite: EECT 2435
- LOTT 2451 Laser Technology (4-3-2)**
 An advanced course in high powered laser systems and supplies including energy transfer and operating parameters and conditions for solid state, ion, molecular gas, and dye lasers. (Formerly ETEC 2471) Prerequisite: CETT 1405.

COMPUTER INFORMATION SYSTEMS (COSC) (006021)
(IMED) (INEW) (ITNW) (ITSC) (ITSE) (ITSW) (ITSE) (POFI)
CIS Majors: All CIS courses require a grade of "C" or better.

- COSC 1300 Introduction to Computing CORE (3-3-1)**
CB 1101015107
 Effect of computers on society, the history and use of computers, computer applications in various segments of society, programming concepts, and hardware and software terminology. This course may not be applied towards a computer science major or minor.
- COSC 1309 Logic Design (3-3-1)**
CB 1102015107
 A discipline approach to problem solving with structured techniques and representation of algorithms using pseudo code and graphical tools. Discussion of methods for testing, evaluation, and documentation.
- COSC 1415 Fundamentals of Programming - Java (4-4-1)**
CB 1102015207
 Introduction to computer programming. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data and file structures, input/output devices, and disks/files.

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COSC 2415	Data Structures - Java	(4-4-1) CB 1102015307
	Further applications of programming techniques. Topics may include file access methods, data structures and modular programming, program testing and documentation, and other topics not normally covered in an introductory computer programming course. Prerequisites: COSC 1309, COSC 1415, ITSC 1405	
IMED 1416	Web Page Design I	(4-4-1)
	Instruction in web page design and related graphic design issues including mark-up languages, web sites, and browsers. Prerequisite: IMED 1441 and IMED 1445. Spring only	
IMED 1441	2-D Interface Design	(4-4-1)
	Skill development in the interface design process including selecting interfaces that are meaningful to users and relative to a project's content and delivery system. Emphasis on aesthetic issues such as iconography, screen composition, colors, and typography. Prerequisite: ITNW 1425.	
IMED 1445	Interactive Multimedia I	(4-4-1)
	Exploration of the use of graphics and sound to create interactive multimedia animations using industry standard authoring software. Prerequisites: ITNW 1425, ITNW 1437 and ITSC 1409 (Formerly CISY 1470)	
IMED 1451	Digital Video	(4-4-1)
	Skill development in producing and editing video and sound for multimedia or web productions. Emphasis on the capture, editing, and outputting of video using a desktop digital video workstation. Prerequisites: ITNW 1425 and ITSC 1425. Fall only.	
IMED 2415	Web Page Design II	(4-4-1)
	A study of mark-up language advanced layout techniques for creating web pages. Emphasis on identifying the target audience and producing web sites according to accessibility standards, cultural appearance, and legal issues. Prerequisites: IMED 1441 and IMED 1445. Spring only.	
IMED 2445	Interactive Multimedia II	(4-4-1)
	Instruction in the use of scripting language to create interactive multimedia projects. Topics include building a user interface, writing script, testing, and debugging. Prerequisites: IMED 1445 and IMED 1451. Spring only.	
INEW 2434	Advanced Web Page Programming	(4-4-1)
	Advanced applications for Web authoring. Topics may include Perl Scripts, Common Gateway Interface (CGI), Database Interaction, Active Server Pages, Java Applets, Javascripts, tables, HTML, and/or interactive elements. Prerequisites: ITSE 1411.	
ITCC 1402	CCNA 1: Networking Basics	(4-4-1)
	A course introducing the basics of networking including network terminology, local area networks (LAN) and wide area networks (WAN). Topics include network protocols such as TCP/IP, Open System Interconnection (OSI) models, cabling and routers.	

ITCC 1406	<p>CCNA 2: Router and Routing Basics (4-4-1)</p> <p>An introduction to basic Cisco router configuration for local area networks. Topics include initial router configuration for TCP/IP, management of Cisco IOS and router configuration files, routing protocols, and access control lists. Prerequisite: ITCC 1402.</p>
ITCC 1442	<p>CCNA 3: Switching Basic and Intermediate Routing (4-4-1)</p> <p>A course focusing on advanced topics including IP addressing techniques, intermediate routing protocols, CLI configuration of switches, Ethernet switching, VLANs, Spanning Tree Protocol, and VLAN Trunking Protocol. Prerequisite: ITCC 1406.</p>
ITCC 1446	<p>CCNA 4: WAN Technologies (4-4-1)</p> <p>This course focuses on advanced IP addressing techniques (Network Address Translation [NAT], Port Address Translation [PAT], and DHCP), WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management and introduction to optical networking. In addition, the student will prepare for the CCNA exam. Prerequisite: ITCC 1442.</p>
ITMC 1401	<p>Microsoft Windows Network and Operating System Essentials (4-4-1)</p> <p>An introduction to Microsoft Windows network operating systems and to the fundamentals of networking technologies that they support.</p>
ITMC 1441	<p>Implementing Microsoft Windows Professional and Server (4-4-1)</p> <p>In-depth coverage of the knowledge and skills necessary to install and configure Microsoft Windows on stand-alone computers and on client computers that are part of a workgroup or domain. Provides the skills and knowledge necessary to install and configure Windows Server to create file, print, and servers. Prerequisites: ITMC 1401 or ITCC 1402 and ITSC 1405.</p>
ITMC 1442	<p>Implementing a Microsoft Windows Network Infrastructure (4-4-1)</p> <p>Skills development in installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows server family of products. Prerequisite: ITMC 1441.</p>
ITMC 1443	<p>Implementing and Administering Microsoft Directory Services (4-4-1)</p> <p>Provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Active Directory service. Focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. Prerequisite: ITMC 1442.</p>
ITNW 1416	<p>Netware Administration (4-4-1)</p> <p>An introduction to network administration.</p>
ITNW 1425	<p>Fundamentals of Networking Technologies (4-4-1)</p> <p>Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software. Prerequisites: COSC 1309 or ITSC 1401, and ITSC 1405. (Formerly CISY 1403).</p>
ITNW 1437	<p>Introduction to the Internet (4-4-1)</p> <p>Introduction to the Internet with emphasis on using the World Wide Web to locate, transfer, and publish information. Survey of emerging technologies on the Internet. Prerequisite: ITSC 1405.</p>



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ITNW 2401	Administering Servers Post-installation and day-to-day administration tasks of various network operating system servers. Prerequisites: ITNW 1425, ITNW 1437 or ITSE 2449, and ITSC 1425. Fall only (Formerly CISY 2421).	(4-4-1)
ITNW 2405	Network Administration Topics include network components, user accounts and groups, network file systems, file system security, and network printing. Prerequisites: ITMC 1401 or ITCC 1402 and ITNW 1437 or ITCC 1406 and ITSC 1425 and ITSC 2439.	(4-4-1)
ITNW 2409	Network Administration for Intranet Perform the role of network administrator or system manager in an Intranet network. Prerequisites: ITNW 1425, ITNW 1437, ITSC 1425 and ITSC 2439. Fall only (Formerly CISY 2420).	(4-4-1)
ITNW 2413	Networking Hardware Maintain network hardware devices. Topics include network cables, servers, and workstations; network connectivity devices such as routers, hubs, bridges, gateways, repeaters, and uninterruptible power supplies; and other networking hardware devices. Prerequisites: ITMC 1401 or ITCC 1402 and ITNW 1437 or ITCC 1406 and ITSC 1425 and ITSC 2439.	(4-4-1)
ITSC 1401	Introduction to Computers Overview of computer information systems. Introduces computer hardware, software, procedures, and human resources. (Formerly CISY 1401).	(4-4-1)
ITSC 1405	Introduction to PC Operating Systems A study of personal computer operating systems. Topics include installation and configuration, file management, memory and storage management, control of peripheral devices, and use of utilities. (Formerly CISY 1402).	(4-4-1)
ITSC 1407	UNIX Operating System I A study of the UNIX operating system including multi-user concepts, terminal emulation, use of system editor, basic UNIX commands, and writing script files. Topics include introductory systems management concepts. Prerequisites: ITSC 1405, ITNW 1425.	(4-4-1)
ITSC 1409	Integrated Software Applications I Integration of applications from popular business productivity software suites. Instruction in embedding data, linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. (Formerly CISY 1411).	(4-4-1)
ITSC 1413	Internet/Web Page Development Instruction in the use of Internet services and the fundamentals of web page design and web site development. Prerequisites: ITSC 1405 and ITNW 1437.	(4-4-1)
ITSC 1425	Personal Computer Hardware A study of current personal computer hardware including personal computer assembly and upgrading, setup and configuration, and troubleshooting. Prerequisite: ITSC 1405 (Formerly CISY 2401).	(4-4-1)

ITSC 1492	<p>Special Topics in Data Processing and Data Processing Technology/Technician (4-4-1)</p> <p>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.</p>
ITSC 2281	<p>Cooperative Education - Computer and Information Sciences, General (2-1-10)</p> <p>Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (Formerly ITSC 2264).</p>
ITSC 2346	<p>Computer Center Management CAPSTONE (3-3-0)</p> <p>Assessment of needs of a computing center and general principles of hardware and software acquisition, maintenance, licensing, and improving usage scheduling. Emphasis on interpersonal communication and management skills. Prerequisites: Must be taken in final semester before graduating or consent of instructor and credit or concurrent enrollment in ENGL 1301. Spring only (Formerly CISY 2450).</p>
ITSC 2421	<p>Integrated Software Applications II (4-4-1)</p> <p>Continued study of computer applications from business productivity software suites. Instruction in embedding data and linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Prerequisites: ITSC 1401 and ITSC 1409 with grades of "C" or better. (Formerly CISY 1412).</p>
ITSC 2437	<p>UNIX Operating System II (4-4-1)</p> <p>Continued study of the UNIX operating system commands. Includes additional scripting topics such as CGI or PERL. Prerequisite: ITSC 1407.</p>
ITSC 2439	<p>Personal Computer Help Desk (4-4-1)</p> <p>Diagnosis and solution of user hardware and software related problems with on-the-job projects. Prerequisites: ITSC 1401, ITSC 1405 and ITSC 1409.</p>
ITSE 1402	<p>Computer Programming (4-4-1)</p> <p>Introduction to computer programming with emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. (Formerly CISY 1400).</p>
ITSE 1411	<p>Beginning Web Page Programming (4-4-1)</p> <p>Web page programming including mark-up languages and scripting languages. May include use of XHTML, CGI, JAVASCRIPT, AND/OR ASP. Introduction to structure and object oriented programming design. Prerequisite: ITSE 2421.</p>
ITSE 1418	<p>Introduction to COBOL Programming (4-4-1)</p> <p>Introduction to computer programming using COBOL. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. Prerequisite: ITSE 1402. (Formerly CISY 1460).</p>



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ITSE 1431	Introduction to Visual BASIC Programming (4-4-1) Introduction to computer programming using Visual BASIC. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. (Formerly CISY 1479).
ITSE 1491	Special Topics in Computer Programming - Java (4-4-1) 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. Prerequisites: ITSE 2443 and ITSW 2437.
ITSE 2409	Introduction to Database Programming (4-4-1) Database development using database programming techniques emphasizing database structures, modeling, and database access. Prerequisites: ITNW 1425, ITSE 2449, and ITSC 1425. Fall only (Formerly CISY 2480).
ITSE 2421	Object Oriented Programming (4-4-1) Introduction to object-oriented programming. Emphasis on the fundamentals of structured design with classes, including development, testing, implementation, and documentation. Includes object-oriented programming techniques, classes, and objects. Prerequisites: ITSE 1418 or ITSE 2449 or consent of instructor. Fall only.
ITSE 2443	Advanced Windows Programming - Java (4-4-1) Further applications of windows programming techniques, including file access methods, data structures and modular programming, program testing and documentation. Prerequisites: COSC 2415 and ITSW 1407.
ITSE 2447	Advanced Database Programming (4-4-1) Application development using complex database programming techniques emphasizing multiple interrelated files, menu design, security implementation, and multiple access. Prerequisite: ITSC 2409 Spring only (Formerly CISY 2490).
ITSE 2449	Advanced Visual BASIC Programming (4-4-1) Further applications of programming techniques using Visual BASIC. Topics include file access methods, data structures and modular programming, program testing and documentation. Prerequisites: ITSE 1402 and ITSE 1431.
ITSE 2457	Advanced Object-Oriented Programming (4-4-1) Application of advanced object-oriented programming techniques such as abstract data structures, class inheritance, virtual functions, and exception handling. Prerequisite: ITSE 2421.
ITSW 1407	Introduction to Database (4-4-1) Introduction to database theory and the practical applications of a database. Prerequisites: COSC 1309, COSC 1415, ITSC 1405 and credit or concurrent enrollment in ITNW 1425.
ITSW 2437	Advanced Database -Oracle (4-4-1) Designed to provide an understanding of advanced functionality of databases. Prerequisites: ITSW 1407.

POFI 1401 Computer Applications I (4-4-1)
 Overview of computer office applications including current terminology and technology. Introduction to computer hardware, software applications, and procedures. Prerequisites: POFI 1445 and concurrent enrollment or credit in ACNT 1404. Fall only (Formerly CISY 2413).

POFI 1441 Computer Applications II (4-4-1)
 Continued study of current computer terminology and technology. Advanced skill development in computer hardware, software applications, and procedures. Prerequisites: POFI 1401 and ITNW 1425. Spring only (Formerly CISY 2414).

CRIMINAL JUSTICE (CRIJ) (07021)

CRIJ 1301 Introduction to Criminal Justice (3-3-0)
CB 4301045124
 History and philosophy of criminal justice and ethical consideration; crime defined; its nature and impact; overview of criminal justice system; law enforcement; courts system; prosecution and defense; trial process; corrections. Fall and Spring.

CRIJ 1306 Court Systems & Practices CAPSTONE (3-3-0)
CB 2201015424
 The judiciary in the criminal justice system; structure of American court system; prosecution; right to counsel; pre-trial release; grand juries; adjudication process types and rules of evidence; sentencing. Fall and Spring.

CRIJ 1307 Crime in America (3-3-0)
CB 4504015225
 American crime problems in historical perspective; social and public policy factors affecting crime; impact and crime trends; social characteristics of specific crimes; prevention of crime. Spring.

CRIJ 1310 Fundamentals of Criminal Law (3-3-0)
CB 2201015324
 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. Spring and Summer.

CRIJ 1313 Juvenile Justice System (3-3-0)
CB 4301045224
 A study of the juvenile justice process to 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 (3-3-0)
CB 4301045324
 A 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.



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CRIJ 2313	Correctional Systems and Practices	(3-3-0) CB 4301045424
	Corrections in the criminal justice system; organization of correctional systems; correctional role; institutional operations; alternatives to institutionalization; treatment and rehabilitation; current and future issues.	
CRIJ 2314	Criminal Investigation	(3-3-0) CB 4301045524
	Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation. Spring & Summer.	
CRIJ 2323	Legal Aspects of Law Enforcement	(3-3-0) CB 4301045624
	Police authority; responsibilities; constitutional constraints; laws of arrest, search and seizure; police liability.	
CRIJ 2328	Police Systems and Practices	(3-3-0) CB 4301045724
	The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues. Fall & Summer.	

WECM Technical Courses

CJCR 1304	Probation and Parole	(3-3-0) 430102
	A survey of the structure, organization, and operation of probation and parole services. Emphasis on applicable state statutes and administrative guidelines.	
CJLE 1333	Traffic Law and Investigation	(3-3-0) 430107
	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 2345	Vice and Narcotics Investigation	(3-3-0) 430107
	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.	
CJSA 1347	Police Organization and Administration	(3-3-0) 430104
	Study of the principles of organizational structure and administration. Topics include theories of management, motivation, and leadership. Focus on a quality approach toward police community interaction.	
CJSA 1348	Ethics in Criminal Justice	(3-3-0) 430104
	A study of ethical thought and issues facing the criminal justice professional. Topics include constitutional ethics, codes of conduct, and standards of conduct.	

CJSA 2323	Criminalistics II Theory and practice of crime scene investigation. Topics include report writing, blood and other body fluids, document examination, etchings, casts and molds, glass fractures, use of microscope, and firearms identification. Pre-requisite CRIJ 2314 Criminal Investigation	
CJSA 2332	Criminalistics III A study of the practical aspects of criminalistics procedures. Topics include crime scene investigation, collecting and preserving evidence, and testifying in court. Pre-requisite CJSA 2323 Criminalistics II	
CJSA 2302	Police Management, Supervision and Related Topics 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.	(3-3-0) 430103

DANCE (DANC)

DANC 1110, 1111, 2110, 2111 Tap (I, II, III, IV)		(1-1-2) CB 5003015226
	This course consists of the basic steps involved in the tap dance. A mixture of the physical and the aesthetic qualities involved in dance will be incorporated. Various pieces of choreography will be set in class.	
DANC 1112, 1113, 2112, 2113 Dance Practicum (I, II, III, IV)		(1-1-2) CB 5003015326
	An activity class stressing the aesthetic aspects of dance. Emphasis on simple steps, movements, and combinations which build up strength, flexibility and body tone, musicality, general awareness of form, line and body placement.	
DANC 1301	Dance Composition	CORE (3-3-0) CB 5003015526
	An advanced modern dance technique followed by various methods of initiating an improvisational piece of movement. Approximately one composition per week will be studied, with topics ranging from highly structured to very liberal compositions. Course designed for students interested in performance career.	
DANC 1341	Ballet I (Basic Course)	CORE (3-3-1) CB 5003015226
	Introduction to the fundamental theory, technique, and vocabulary of classical ballet.	
DANC 1342	Ballet II	CORE (3-3-1) CB 5003015226
	Continuation of DANC 1341. Prerequisite: DANC 1341.	
DANC 1345	Modern Dance I	CORE (3-3-0) CB 5003015226
	This course serves as an introduction to the various dance techniques. Special attention will be given to modern technique, improvisation and group choreography.	



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DANC 1346	Modern Dance II	CORE	(3-3-0) CB 5003015226
	Continuation of DANCE 1345. A modern dance technique based on the style of contemporary greats. An in-depth study of an exploration into the various choreographic aspects in modern dance. A repertoire of choreography based on various modern techniques. Student improvisation and choreography will also be emphasized.		
DANC 1347	Jazz Dance I	CORE	(3-3-0) CB 5003015226
	An introduction to the style, technique, and vocabulary associated with jazz dance. This class is structured with a Luigi jazz warm-up, which provides the student with an excellent stretch-strength program with emphasis on correct alignment of the body. A repertoire of classical, modern, and Broadway jazz will be used. Individual skills will be emphasized rather than choreography.		
DANC 1348	Jazz Dance II	CORE	(3-3-0) CB 5003015226
	Continuation of DANC 1347. This course consists of a Luigi based warm-up followed with intermediate level choreography devised from various jazz styles.		
DANC 1351	Dance Performance I	CORE	(3-3-0) CB 5003015226
	Instruction and participation in ballet, jazz, modern, Ballet Folklorico, or Spanish dance forms designed to expose students to dance as a performing art. Directed experiences in dance concerts, rehearsals, workshops, lecture demonstrations, and mini performances. Rehearsals are mandatory.		
DANC 1352	Dance Performance II	CORE	(3-3-0) CB 5003015226
	Instruction and participation in ballet, jazz, modern, Ballet Folklorico, or Spanish dance forms designed to expose students to dance as a performing art. Directed experiences in dance concerts, rehearsals, workshops, lecture demonstrations, and mini performances. Rehearsals are mandatory. Prerequisite: DANC 1351 or permission of instructor.		
DANC 1353	Spanish Ballet I		(3-1-2) CB 5003015226
	Designed for instruction in fundamental techniques of Spanish classical dance, with emphasis on arm and rhythmic movements, and use of castanets.		
DANC 1354	Spanish Ballet II		(3-1-2) CB 5003015226
	Continuation of DANC 1353. Prerequisite: DANC 1353.		
DANC 2341	Ballet III (Intermediate Course)	CORE	(3-3-1) CB 5003015226
	Increasingly more difficult ballet steps with emphasis on long series of movements, adagio, allegro, beats, jumps, tours, etc. Concentration on clarity, quality and precise execution of movement. Pointe work. Prerequisite: DANC 1341 and 1342 or consent of instructor.		
DANC 2342	Ballet IV	CORE	(3-3-1) CB 5003015226
	Continuation of DANC 2341. Prerequisite: DANC 2341.		

DANC 2303	Dance Appreciation I	CORE	(3-3-0) CB 5003015426
	A general course in dance appreciation open to all college students. Understanding, enjoyment, and critical evaluation of dance are developed through view of dance films and exposure to different dance styles and dance artists. Analysis of artistic elements of dance line, texture, shape, color, mood and quality. Valuable historical data on dance and current professional opportunities available in dance.		
DANC 2325	Anatomy and Kinesiology for Dance	CORE	(3-3-0) CB 5003015226
	An activity class stressing the aspects of dance anatomy and Kinesiology. Emphasis on dance steps, movements, exercises, and combinations which build up strength, flexibility, and endurance. General awareness of posture, body alignment, and body placement will be developed.		
DANC 2345	Modern Dance III	CORE	(3-3-0) CB 5003015226
	Continuation of DANC 1346. An advanced modern dance technique based on the style of contemporary greats. An in-depth study of choreographic aspects in modern dance. Special emphasis will be on student choreography designed for performance in the semester dance concert. Student choreography and performance for the semester dance concert in required.		
DANC 2346	Modern Dance IV	CORE	(3-3-0) CB 5003015226
	Continuation of DANC 2345. An advanced modern dance technique based on the style of contemporary greats. An in-depth study of choreography aspects in modern dance. Special emphasis will be on student choreography designed for performance in the semester dance concert. Student choreography and performance for the semester dance concert is required.		
DANC 2347	Jazz Dance III	CORE	(3-3-0) CB 5003015226
	Continuation of DANC 1348. A Luigi based warm-up followed with advanced study of the various styles of jazz choreography. Special emphasis will be on student choreography designed for performance in the semester dance concert.		
DANC 2348	Jazz Dance IV	CORE	(3-3-0) CB 5003015226
	Continuation of DANC 2348. An advanced jazz technique which is followed by a study of the methods for initiating jazz choreography. Student choreography and performance in the semester dance concert is required.		
DANC 2351	Dance Performance III	CORE	(3-3-0) CB 5003015226
	Instruction and participation in ballet, jazz, modern, Ballet Folklorico, or Spanish dance forms designed to expose students to dance as a performing art. Directed experiences in dance concerts, rehearsals, workshops, lecture demonstrations, and mini performances. Rehearsals are mandatory. Prerequisite: DANC 1352 or permission of instructor.		

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DANC 2352	Dance Performance IV	CORE	(3-3-0) CB 5003015226
	Instruction and participation in ballet, jazz, modern, Ballet Folklorico, or Spanish dance forms designed to expose students to dance as a performing art. Directed experiences in dance concerts, rehearsals, workshops, lecture demonstrations, and mini performances. Rehearsals are mandatory. Prerequisite: DANC 2351 or permission of instructor.		
DANC 2353	Spanish Ballet III		(3-1-2) CB 5003015226
	Continuation of DANC 1354. Prerequisite: DANC 1354.		
DANC 2354	Spanish Ballet IV		(3-1-2) CB 5003015226
	Continuation of DANC 2353. Prerequisite: DANC 2353.		

DIESEL ENGINE MECHANICS AND REPAIR (DEMR)

DEMR 1229	Preventative Maintenance		(2-1-3)
	An introductory course designed to provide the students with basic knowledge of proper servicing practices. Content includes record keeping and condition of major systems.		
DEMR 1301	Shop Safety and Procedures		(3-2-4)
	A study of shop safety rules, basic shop tools, and test equipment.		
DEMR 1317	Basic Brake Systems		(3-2-4)
	An introduction to the basic principles of brake systems of diesel powered equipment. Emphasis on maintenance, repairs, and troubleshooting.		
DEMR 1323	Heating, Ventilation, and Air Conditioning Troubleshooting and Repair		(3-2-2)
	Introduction to heating, ventilation, and air conditioning theory, testing, and repair. Emphasis on refrigerant reclamation, safety procedures, specialized tools, and repairs.		
DEMR 1327	Tractor Trailer Service and Repair		(3-2-2)
	An introduction to and familiarization with components and systems related to tractor-trailer service. Emphasis on records required by the Department of Transportation.		
DEMR 1330	Steering and Suspension I		(3-2-4)
	A study of design, function, maintenance, and repair of steering and suspension systems. Emphasis on troubleshooting and repair of failed components.		
DEMR 1405	Basic Electrical Systems		(4-3-4)
	An introduction to the basic principles of electrical systems of diesel powered equipment with emphasis on starters, alternators, batteries, and regulators.		
DEMR 1410	Diesel Engine Testing and Repair I		(4-3-4)
	An introduction to testing and repairing diesel engines including related systems' specialized tools.		

DEMR 1411	Diesel Engine Training and Repair II Coverage of testing and repairing diesel engines including related systems' specialized tools.	(4-3-4)
DEMR 1416	Basic Hydraulics Fundamentals of hydraulics including components and related systems.	(4-3-4)
DEMR 1421	Power Train I Introduction to fundamentals, repair, and theory of power trains including clutches, transmissions, drive shafts, and differentials. Emphasis on inspection and repair.	(4-3-4)
DEMR 1447	Power Train II Continuation of fundamentals and theory of power train systems. Emphasis on disassembly, inspection, and repair of power train components.	(4-3-4)
DEMR 2331	Advanced Brake Systems An advanced brake systems course for diesel powered equipment. Advanced concepts and schematics including anti-lock, air, pneumatic, and hydraulic brake systems and related components.	(3-2-4)
DEMR 2334	Advanced Diesel Engine Tune-Up and Troubleshooting Capstone 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.	(3-2-4)
DEMR 2346	Advanced Heating, Ventilation, and Air Conditioning Advanced concepts in heating, ventilation, and air conditioning. Emphasis on systematic troubleshooting.	(3-2-2)
DEMR 2348	Failure Analysis An advanced course designed for analysis of typical part failures on equipment.	CAPSTONE (3-2-3)
DEMR 2432	Electronic Controls Advanced skills in diagnostic and programming techniques of electronic control systems.	(4-3-4)

DRAMA (DRAM)

DRAM 1120, 1121, 2120, 2122 Theater Practicum	A laboratory course open to all students doing work in actual play production. Students are required to attend necessary rehearsals and other assigned workshop meetings.	(1-0-1) CB 5005015226
DRAM 1310	Introduction to Theater Survey of all phases of theater including its history, dramatic works, stage techniques, production procedures, and relation to the fine arts. Participation in major productions may be required. Prerequisite: 12.0 reading level and eligibility for English 1301.	(3-3-0) CB 5005015126

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DRAM 1330	Stagecraft	(3-3-2) CB 5005025126
	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: 12.0 reading level and eligibility for English 1301.	
DRAM 1351	Acting I	(3-3-0) CB 5005065126
	Development of basic skills and techniques of acting including increased sensory awareness, ensemble performing, character analysis, and script analysis. Emphasis is on the mechanics of voice, body, emotion, and analysis as tools for the actor. Prerequisite: 12.0 reading level and eligibility for English 1301.	
DRAM 1352	Acting II	(3-3-0) CB 5005065126
	Development of basic skills and techniques of acting including increased sensory awareness, ensemble performing, character analysis, and script analysis. Emphasis is on the mechanics of voice, body, emotion, and analysis as tools for the actor. Prerequisite: 12.0 reading level and eligibility for English 1301.	
DRAM 2366	Development of the Motion Picture	(3-3-0) CB 5006025126
	Emphasis on the analysis of the visual and aural aspects of selected motion pictures, dramatic aspects of narrative films, and historical growth and sociological effect of film as an art. Prerequisite: 12.0 reading level and eligibility for English 1301.	

ECONOMICS (ECON)

ECON 2301	Principles of Macroeconomics	CORE	(3-3-0) CB 4506015125
	General treatment of the nature and scope of economics. The concept of the economizing problem is carefully developed in order to lay the foundation necessary for putting the many particular subject areas of economics into perspective. This course emphasizes macroeconomics in such areas as national income analysis; the business cycle; the equilibrium levels of output, employment and income; Classical and Keynesian economics theories; the economics of fiscal policy and monetary policy; money and banking; the Federal Reserve System; and the economics of wage-price policies. Government in economics is given major treatment in such areas as the Five Fundamental Economic Questions; mixed capitalism; and the facts of American capitalism in today's world. Prerequisites: Sophomore standing, MATH 1314, ENGL 1301.		
ECON 2302	Principles of Microeconomics	CORE	(3-3-0) CB 4506015125
	This course gives considerable attention to microeconomics in general and to the theory of the firm in particular. The economics of the firm and resource allocation is given thorough treatment. General equilibrium, price interrelationships and input-output capitalism. Finally, current domestic and international problems are the subject of class discussions. The control of industry; American agriculture; labor unions and collective bargaining; the economics of inequality and poverty; social imbalance; and the economics of international trade, with special emphasis upon OPEC, the Third and Fourth Worlds, the European Common Market, East-West trade, and the economics of the Americas are given special consideration. Prerequisite: ECON 2301.		

EDUCATIONAL ASSISTANT (EDTC) (005222)

EDTC 1264 Practicum Teacher Assistant/Aide (2-0-14)

A basic or intermediate type of non-health professions work-based instruction that provides basic career exploration or helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. The emphasis is on practical work experience. Indirect supervision is provided by the work supervisor. A practicum may be a paid or unpaid learning experience.

EDTC 1301 Instructional Practices: Educational Processes (3-3-0)

A study of the role and responsibilities of the instructional teacher assistant with emphasis on development of professionalism and effective communication strategies with adults. Topics include the various codes of ethics governing the educational field, the issue of confidentiality, learners' rights and responsibilities, and challenges facing schools.

EDTC 1305 Reading Problems (3-3-0)

Introduction to effective methods of identifying and correcting various reading difficulties. Emphasis on the effect of reading difficulties on reading ability and the various techniques recommended for correcting each difficulty and the use of strategic approaches to the teaching of reading. Topics include the importance of direct instruction and motivational learning activities with abundant practice in the act of reading.

EDTC 1307 Teaching Reading in the Elementary School (3-3-0)

Fundamental concepts and principles of reading instruction. Topics include readiness, beginning reading instruction, how literacy emerges, classroom learning environments, word-attach skills, study skills, comprehension, other aspects of the reading program, and examination of varied materials and techniques for teaching reading.

EDTC 1311 Instructional Practices: Effective Learning Environments (3-3-0)

A study of developmentally appropriate strategies in core curriculum areas and the environment. Topics include methods for supporting the lead classroom teacher in planning and implementing educational goals, teamwork skills, and ways of providing and reporting instructional accommodations or modifications.

EDTC 1313 Introduction To Educational Software and Technology (3-3-0)

Introduction to the use of computer hardware and software in the educational setting including opportunities for guided instruction with several software applications.

EDTC 1317 Developing Positive Student Behavior (3-3-0)

A study of techniques to influence the development of positive behavior in the school environment. Topics include development of competencies in establishing and managing routines, promoting self-esteem, teaching negotiation/conflict resolution strategies, and enhancing positive self-direction. Emphasis on implementation of a behavior management plan and the role of the teacher assistant in this process.

EDTC 1321 Bilingual Education (3-3-0)

A course in the core techniques of bilingual education. Topics include awareness of cultural diversity, teaching techniques, material development, and historical and philosophical concepts of bilingual/bicultural education.

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- EDTC 1325 Principles & Practices of Multicultural Education (3-3-0)**
Examination of cultural variations found in our society and reflected in our pluralistic classrooms. Topics include culturally influenced behavior, major cultures, cultural diversity, and the process of intercultural communication and teaching, including differences in lifestyles, communication styles, learning styles, and various sources of stress for diverse cultural groups.
- EDTC 1341 Computer Instruction for Educators (3-3-1)**
A course in specialized computer utilization for educators. Topics include the integration of educational computer terminology, system operations, software, and multimedia in the contemporary classroom environment.

ELECTRICAL TECHNOLOGY (ELPT) (ELTN) (008822)

- ELPT 1311 Basic Electrical Theory (3-2-4)**
An overview of the theory and practice of electrical circuits including calculations as applied to alternating and direct current.
- ELPT 1315 Electrical Calculations I (3-3-0)**
Introduction to mathematical applications utilized to solve problems in the electrical field. Topics include fractions, decimals, percentages, simple equations, ratio and proportion, unit conversions, and applied geometry.
- ELPT 1319 Fundamentals of Electricity I (3-2-4)**
An introduction to basic direct current (DC) theory including electron theory and direct current applications.
- ELPT 1320 Fundamentals of Electricity II (3-2-4)**
An introduction to alternating current (AC) including Ohm's Law. Topics include AC voltage, frequency, mechanical and electrical degrees, waveforms, resistors, capacitors, and inductors.
- ELPT 1321 Introduction to Electrical Safety and Tools (3-3-0)**
A comprehensive overview of safety rules and regulations and the selection, inspection, use, and maintenance of common tools for electricians.
- ELPT 1325 National Electrical Code I (3-3-0)**
An introductory study of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis on wiring design, protection, methods, and materials; equipment for general use; and basic calculations.
- ELPT 1329 Residential Wiring (3-2-4)**
Instruction in wiring methods used for single family, two family, and multi-family dwellings.
- ELPT 1331 Survey of the National Electrical Code (3-3-0)**
An overview of the content, format, rules, and calculations in the National Electrical Code (NEC).
- ELPT 1345 Commercial Wiring (3-2-4)**
Instruction in commercial wiring methods.

ELPT 1349	Electrical Blueprint Reading	(3-2-4)
	An overview of electrical blueprint reading. Topics include symbols, specifications, panel and lighting schedules, and riser diagrams.	
ELPT 1351	Electrical Machines	(3-2-4)
	General principles and fundamentals of direct current (DC) motors, single-phase and polyphase alternating current (AC) motors, generators, and alternators. Emphasis on their construction, characteristics, efficiencies, starting, and speed control.	
ELPT 1357	Industrial Wiring	(3-2-4)
	Instruction in wiring methods used for industrial installations.	
ELPT 2215	Electrical Calculations II	(2-2-0)
	Further study of mathematical applications utilized to solve problems in the electrical field. Topics include fractions, decimals, ratio and proportion, applied geometry, and utilization of right triangles to calculate electrical values.	
ELPT 2301	Journeyman Electrician Exam Review	(3-3-0)
	Preparation for journeyman electrician licensure with emphasis on calculations and the National Electrical Code (NEC.)	
ELPT 2305	Motors and Transformers	(3-2-4)
	A study of the principles of operation of single- and three- phase motors and transformers. Topics include transformer banking, power factor correction, and protective devices.	
ELPT 2337	Electrical Planning and Estimating	(3-2-4)
	Instruction and preparation of estimates for residential commercial, and industrial wiring systems. Skill development in a variety of electrical techniques.	
ELPT 2343	Electrical Systems Design	(3-2-4)
	Skill development in the electrical design of a commercial or industrial project including layout, types of equipment, placement, sizing of electrical equipment, and all electrical calculations according to the requirements of the National Electrical Code (NEC).	
ELPT 2350	Maintenance Electrician Exam Review	(3-3-0)
	Instruction in the general requirements and fundamentals of electrical maintenance with emphasis on wiring methods and electrical theory.	
ELTN 1341	Basic Motor Controls	(3-3-0)
	Instruction in motor control fundamentals and control wiring in accordance with the National Electrical Code (NEC). Skill development in troubleshooting, maintenance, and repair of various control circuits.	
ELTN 1343	Electrical Troubleshooting	(3-2-4)
	Instruction in the maintenance, theory of operation, troubleshooting, and repair of circuits of various residential, commercial, and industrial electrical systems.	

**EMERGENCY MEDICAL SERVICES/
PARAMEDIC (EMSP)**

(008040)

EMSP 1160 Clinical-Emergency Medical Technician (1-0-5)

A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry .

Key Concepts: The student will gain proficiency and demonstrate competence in the use of oxygen therapy, patient assessment, bandaging and splinting, the use of the AED unit, and the administration of drugs allowed by TDH for EMT-B's.

Prerequisite: Acceptance into EMS Program; EMSP 1501.

EMSP 1163 Clinical-Cardiology (1-0-4)

A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry .

Key Concepts: Students will become competent in analyzing EKG strips and cardiac drug therapy. Prerequisite: EMSP 2544.

EMSP 1263 Clinical Foundations (2-0-8)

A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry.

Key Concepts: The student will gain proficiency and demonstrate competence in the use of equipment and techniques necessary to stabilize airways, simple and complex, and provide shock treatment to include PASG trouser application and I.V. Therapy. Prerequisites: Certified as an EMT-Basic, EMSP 1501 and EMSP 1160; EMSP 1338, EMSP 1355, EMSP 1356 and Co-requisite: HPRS 2300.

EMSP 1338 Introduction to Advanced Practice (3-2-2)

An exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital.

Learning Outcomes: At the completion of this module, the student will understand the roles and responsibilities of a paramedic within the EMS system; apply the basic concepts of development, pathophysiology and pharmacology to assessment and management of emergency patients; be able to properly administer medications; communicate effectively with patients; and understand the medical/legal and ethical issues relating to EMS practice as well as the issues impacting the well being of the paramedic. Prerequisites: NREMTB, EMSP 1501, EMSP 1160; Co-requisite: HPRS 2300, EMSP 1355, EMSP 1356.

EMSP 1355 Trauma Management (3-2-2)

A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with traumatic injuries.

Learning Outcomes: At the completion of this module, the student will be able to integrate the pathophysiological principles and assessment findings to formulate a field impression; and implement the treatment plan for the trauma patient. Prerequisites: EMSP 1501, EMSP 1160; Co-requisites: EMSP 1338, and EMSP 1356.

EMSP 1356 Patient Assessment and Airway Management (3-2-2)

A detailed study of the knowledge and skills required to reach competence in performing patient assessment and airway management.

Learning Outcomes: At the completion of this module, the student will be able to take a proper history and perform a comprehensive physical exam on any patient; develop a patient care plan; communicate with others; and establish and/or maintain a patent airway, oxygenate, ventilate a patient. Prerequisites: EMSP 1501, EMSP 1160; Co-requisites: HPRS 2300, EMSP 1338, EMSP 1355.

EMSP 1501 Emergency Medical Technician-Basic (5-3-8)

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.

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Learning Outcomes: The student will display a working knowledge of clinical information and related topics relevant to the practice of pre-hospital emergency medical care of the EMT-Basic level: demonstrate the ability to competently perform all applicable skills; and exhibit attitudes and behavior consistent with the ethics and professionalism expected of the EMT-Basic. Prerequisite: Acceptance into the EMS Program; Co-requisite: EMSP 1160, MDCA 1313 and MDCA 1409.

EMSP 2243 Assessment Based Management (2-2-0)

The capstone course of the EMSP program. Designed to provide for teaching and evaluating comprehensive, assessment-based care management.

Learning Outcomes: At the completion of this module, the student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression; and implement a treatment plan for patients with common complaints. Prerequisites: All EMSP courses except EMSP 2460. Co-requisite: EMSP 2460.

EMSP 2330 Special Populations (3-2-2)

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.

Learning Outcomes: At the completion of this module, the student will be able to integrate pathophysiological principles and assessment finding to formulate a field impression and implement a treatment plan for neonatal, pediatric, and geriatric patients, diverse patients and chronically ill patients. Prerequisites: EMSP 2544, EMSP 1163; Co-requisites: EMSP 2434, and EMSP 2338

EMSP 2338 EMS Operations (3-2-2)

A detailed study of the knowledge and skills necessary to reach competence to safely manage the scene of an emergency.

Learning Outcomes: At the completion of this unit, the student will be able to safely manage medical incidents, rescue situations, hazardous material and crime scenes. Prerequisites: EMSP 2544, EMSP 1163; Co-requisites: EMSP 2330, and EMSP 2434.

EMSP 2434 Medical Emergencies (4-3-3)

A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of patients with medical emergencies.

Learning Outcomes: At the completion of this module, the student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the medical patient. Prerequisites: EMSP 2544, EMSP 1163; Co-requisites: EMSP 2330, and EMSP 2338; Co-requisite: EMSP 2460.

EMSP 2460 Clinical Rotation Ambulance and ER (4-0-16)

A method of instruction providing detailed education, training and work-based experience, and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Transfer Level English

ENGL 1301 Composition I CORE (3-3-0)
CB 2304015112

A college level, transfer course, ENGL 1301 requires the study and mastery of the basic principles of effective expository and persuasive writing. Each stage of the writing process is reviewed with special emphasis given to revision and editing. Substantial writing requirement in addition to a documented paper. Prerequisites: (1) Minimum reading level of 12.0 or credit in READ 0375 or passing score on TASP reading test; AND, (2) Score of 57 or higher on the LCC English assessment tests or credit in 0373 or passing score on the TASP writing test, passing score on Quick TASP or COMPASS or recommendation by an English instructor with the approval of the English Department Chair on the basis of writing ability as demonstrated during the first class day.

ENGL 1302 Composition II CORE (3-3-0)
CB 2304015112

A continuation of 1301, ENGL 1302 places greater emphasis on analytical and persuasive writing, with writing assignments based on readings in fiction, poetry, and drama. The course also introduces students to effective research processes and documentation techniques; one long or two short acceptable research papers are required. Prerequisite: ENGL 1301.

ENGL 2307 Creative Writing (3-3-0)
CB 2305015112

Course content varies by semester. May focus on fiction, poetry, script and screen writing, creative nonfiction, etc. Focus is on reading published work, learning to recognize and use different elements of the genre being studied, and writing and revising original works. Workshops, group discussions, exercises intended to focus on individual elements of the genre, conferences, and intensive writing and revising are typical components of the course, regardless of genre on which the course focuses. Prerequisite: ENGL 1301 or the approval of the instructor.

ENGL 2311 Technical and Business Writing (3-3-0)
CB 2311015112

Designed for students in all careers, this course emphasizes the practical application of composition principles in the writing of documents typically required in various professions. Selected readings and a research paper are required. Prerequisite: ENGL 1301.

Survey of Literature Courses

LCC offers three 6-hour credit surveys of English literature (2322 and 2323), World literature (2332 and 2333), and American literature (2327 and 2328). Students should consult the catalogue of the university to which they plan to transfer to determine which survey course is most appropriate. Generally, any of the three surveys is acceptable. Students who need 6 credits of sophomore English should take both halves of the same survey and not mix surveys. Part one of a survey should be taken first, but students may elect to take the second part before the first, if they so desire.

ENGL 2322 British Literature I CORE (3-3-0)
CB 2308015112

English literature from Beowulf through Alexander Pope. Study of masterpieces of prose, poetry, and drama, including a Shakespearean play. Substantial writing requirement in addition to an acceptable research paper. Prerequisite: ENGL 1302 or 2311.

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ENGL 2323	British Literature II	CORE	(3-3-0) CB 2308015112
	English literature from the Romantic Age to the present. Study of prose, poetry, drama, and fiction; reading of one or more selected novels required. Substantial writing requirement in addition to an acceptable research paper. Prerequisite: ENGL 1302 or 2311.		
ENGL 2326	Minority Literature	CORE	(3-3-0) CB 2307015112
	Imaginative literature drawn from diverse minority groups that include: Mexican-American, African-American, Native-American and others. Substantial writing requirement in addition to an acceptable research paper. Prerequisite: ENGL 1302 or consent of department chairperson.		
ENGL 2327	American Literature I	CORE	(3-3-0) CB 2307015112
	A survey of American Literature from 1492 to the mid-nineteenth century. Substantial writing requirement including an acceptable research paper. Prerequisite: ENGL 1302 or 2311.		
ENGL 2328	American Literature II	CORE	(3-3-0) CB 2307015112
	A survey of American Literature from the mid-nineteenth century to the present. Substantial writing requirement including an acceptable research paper. Prerequisite: ENGL 1302 or 2311.		
ENGL 2332	World Literature I	CORE	(3-3-0) CB 1601015213
	A survey of the masterpieces and great authors of world literature from the Greeks through the early 17th century. Substantial writing requirement including an acceptable research paper. Prerequisite: ENGL 1302 or 2311.		
ENGL 2333	World Literature II	CORE	(3-3-0) CB 1601045213
	A survey of the masterpieces and great authors of world literature from the mid-17th century to the present. Substantial writing requirement including an acceptable research paper. Prerequisite: ENGL 1302 or 2311.		

ENGLISH AS A SECOND LANGUAGE (ENSL)

ENSL 0271	Beginning English		(2-3-0) CB 3201085612
	A course for beginning students in English as a Second Language. It introduces the student to the fundamentals of the English sound system, develops spelling and reading skills and builds a working vocabulary. Required to be taken with ENSL 0275.		
ENSL 0272	Intermediate English		(2-3-0) CB 3201085712
	An introductory course devoted to the fundamentals of English composition for students whose first language is other than English. The course provides extensive practice for mastering the mechanics of basic English composition including punc-		

tuation, capitalization, verb conjugations, and sentence construction. Reading, spelling and vocabulary exercises are also used extensively to provide additional reinforcement in developing proficiency in the language. Required to be taken with ENSL 0276.

**ENSL 0273 High Intermediate English (2-3-0)
CB 3201085712**

An intermediate level composition and reading course for students of English as a Second Language. The course focuses on a detailed study of the parts of speech, their usage and functions, and offers considerable writing practice using, among others, compound verb forms, sentence combining exercises and vocabulary development; also further study of spelling and punctuation rules. Required to be taken with ENSL 0277.

**ENSL 0274 Advanced English (2-3-0)
CB 3201085712**

An advanced course in the fundamentals of English composition for students of English as a Second Language preparing to enter English classes. The primary emphasis of the course is on developing mastery in studying the different kinds of sentences, dependent clauses, and other grammar structures. Required to be taken with ENSL 0278.

**ENSL 0275 Beginning English Communication (2-3-2)
CB 3201085512**

An introductory course in English as a Second Language to help beginning students develop the four basic language skills: speaking, comprehension, reading and writing. Considerable emphasis is placed upon the development of proper pronunciation and intonation; also developed are the performance of basic conversational functions such as informing, inquiring, and persuading. Required to be taken with ENSL 0271.

**ENSL 0276 Intermediate English Communication (2-3-2)
CB 3201085512**

English as a Second Language for persons with working knowledge of basic oral and aural skills. Designed to develop further the oral and comprehension skills in the language through intensive practice with oral-aural drills of structured patterns, including past tense forms, indirect speech, count and non-count nouns and auxiliary verbs. Expansion of semantic categories (numbers, amounts, rates). Required to be taken with ENSL 0272.

**ENSL 0277 High Intermediate English Communication (2-3-2)
CB 3201085512**

An intermediate level course in English as a Second Language emphasizing competency in conversation and comprehension skills. Special attention is focused upon developing fluency through extensive use of dialogues, and role playing. Performance functions are further expanded to include requests, commands, exclamations; general grammar concepts and usage are integrated into the course. Required to be taken with ENSL 0273.

**ENSL 0278 Advanced English Communication (2-3-2)
CB 3201085512**

Intensive study of English as a Second Language for persons with oral and some written mastery of the advanced sentence structure and vocabulary. Designed to continue developing fluency in more advanced language tense, the passive voice, if-

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clauses modal auxiliaries. Performance functions studied include suggestions, advice, thanking, and apologizing. Required to be taken with ENSL 0274.

ENSL 0279 Accelerated Conversation for ENSL Students I (2-3-0)
CB 3201085512

This course is for English as a Second Language students who have completed the ENSL program or who are currently enrolled in the fourth (ENSL 0278/0274) level. Students are required to participate in situational dialogues, conversations and in role playing. Topics to be covered may vary. May be taken before or after ENSL 0280.

ENSL 0280 Accelerated Conversation for ENSL Students II (2-3-0)
CB 3201085512

This course is a continuation of ENSL 0279. Students will participate in varied activities to enhance their conversational skills such as situational dialogues, oral presentations, improvisational speeches, etc. Topics to be covered may vary. May be taken before or after ENSL 0279.

ENSL 0370 Basic English Grammar (3-3-0)
CB 3201085712

Students in this course study and practice basic English grammar in both oral and written contexts with the ability to compose well constructed, idiomatic sentences of varied types as the course goal.
Prerequisite: Combined score of 26 or lower on LCC English assessment tests.

ENSL 0371 Advanced ESL Reading (3-3-0)
CB 3201085612

This developmental reading course is designed to help students strengthen their reading skills and thus prepare them to be successful in college level courses. Reading comprehension, rate, flexibility, selectivity, and vocabulary development are emphasized. Prerequisite: Score of 35 or below on the TCOMP/CPLCE local placement exam.

FIRE PROTECTION TECHNOLOGY (FIRT) (006821)

FIRS 1232 Firefighter Certification VII CIP 43.0203

An in-depth study and practice of simulated emergency operations and hands-on-live fire training exercises, incident command procedures, and combined operations using proper extinguishing methods. Emphasis on safety. THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION.

FIRS 1301 Firefighter Certification I CIP 43.0203

An introduction to firefighter safety and development. Topics include Texas Commission on Fire Protection Rules and Regulations, firefighter safety, fire science, personal protective equipment, self contained breathing apparatus, and fire reports and records. THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION.

FIRS 1313	Firefighter Certification III	CIP 43.0203
	<p>General principles of fire apparatus, pump operations, fire streams, and public operations as they relate to fundamental development of basic firefighter skills. THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION.</p>	
FIRS 1319	Firefighter Certification IV	CIP 43.0203
	<p>A study of equipment, tactics, and procedures used in forcible entry, ventilation, salvage, and overhaul. Preparation for certification as a basic firefighter. THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION.</p>	
FIRS 1329	Firefighter Certification VI	CIP 43.0203
	<p>The study of fire inspection techniques and practices, public transportation, fire cause determination. Topics include fire protection systems, wildland fire, and pre-incident planning. Preparation for certification as a basic firefighter. THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION.</p>	
FIRS 1407	Firefighter Certification II	CIP 43.0203
	<p>The study of basic principles and skill development in handling fire service hose and ladders. Topics include the distribution system of water supply, basic building construction, and emergency service communication, procedures, and equipment. THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION.</p>	
FIRS 1423	Firefighter Certification V	CIP 43.0203
	<p>The study of ropes and knots, rescue procedures and techniques, and hazardous materials. Preparation for certification as a basic firefighter. THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A FIRE ACADEMY BY THE TEXAS COMMISSION ON FIRE PROTECTION.</p>	
FIRT 1307	Fire Prevention Codes and Inspections (Originally FT 306 converted to FPTC 1304)	(3-3-0)
	<p>Study of local building and fire prevention codes. Emphasis on fire prevention inspections, practices, and procedures. Fire prevention organization, public cooperation and image, recognition of fire hazards, insurance problems and legal aspects, development and implementation of a systematic and deliberate inspection program, survey of local, state, and national codes pertaining to fire prevention and related technology, relationship between building inspection agencies and fire prevention organizations. Engineering as a solution to fire hazards. Fall.</p>	
FIRT 1309	Fire Administration I (Originally FT 306 converted to FPTC 2306)	(3-3-0)
	<p>An in-depth study of departmental policies and procedures with respect to training; communication systems, public relations, record keeping, report writing, and the legal aspects of documentation and insurance rates and ratings. Spring or Summer.</p>	

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- FIRT 1315 Hazardous Materials I (3-3-0)**
(Originally FT 309 converted to FPTC 2309)
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. Spring or Summer.
- FIRT 1319 Firefighter Health and Safety (3-3-0)**
(Originally FT 314 converted to FPTC 1314)
Study of firefighter occupational safety and health in emergency and non-emergency situations. Topics will include the components of a comprehensive safety and health program, the safeguarding of personnel from dangerous and hazardous materials and incidents, and the implementation of comprehensive safety policies and procedures plan. Fall.
- FIRT 1329 Building Codes and Construction (3-3-0)**
(Originally FT 307 converted to FPTC 2307)
Examination of building codes and requirements, construction types, and building materials. Topics include walls, floorings, foundations, and various roof types and the associated dangers of each. Building code regulations will be studied. Spring.
- FIRT 1347 Industrial Fire Protection (3-3-0)**
(Originally FT 411 converted to FPTC 2311)
Study of industrial emergency response teams and specific concerns related to business and industrial facilities. Review of the essential elements in analyzing a fire scene and determining the different tactical and operational sequences and procedures required to save lives, save property, extinguish the fire, and perform a post-fire analysis and study. Different scenarios will be discussed. Summer I or II.
- FIRT 1349 Fire Administration II (3-3-0)**
(Originally FT 310 converted to FPTC 2310) **CAPSTONE**
In-depth study of fire service management as pertaining to budgetary requirements, administration, organization of divisions within the fire service, and relationships between the fire service and outside agencies.

FRENCH (FREN)

- FREN 1300 Conversational French I (3-3-0)**
CB 1609015413
This course is an introduction to French Language through basic practice in comprehension and production of the spoken language. Everyday situations, functional communicational approach. Prerequisite: none.
- FREN 1310 Conversational French II (3-3-0)**
CB 1609015413
This course is the second level in the introduction to French Language through basic practice in comprehension and production of the spoken language. Beyond everyday situations, the student will learn to discuss topics of culture or news. Functional communicational approach. Prerequisite: FREN 1300.
- FREN 1411 Beginning French I (4-3-2)**
CB 1609015113
Drill in pronunciation and aural comprehension; vocabulary development, dictation and spoken exercises designed to teach the essentials of grammar; simple readings and conversation on the student's level. Lab required. Fall Semester only.

- FREN 1412** **Beginning French II** (4-3-2)
CB 1609015113
 Study of grammar continued; composition and conversation in French. Prerequisite: FREN 1411 or consent of the department chairperson. Lab required. Spring Semester only.
- FREN 2311** **Intermediate French I** (3-3-0)
CB 1609015413
 Review of grammar; basic composition, conversation, and idioms, reading of not too difficult French in a selection of stories, essays, and plays. Prerequisite: FREN 1412 or the equivalent. Fall Semester only.
- FREN 2312** **Intermediate French II** (3-3-0)
CB 1609015313
 A general reading course with practice in basic composition and conversation based on the reading of representative literary works of modern French authors and poets. Prerequisite: FREN 2311 or equivalent. Spring Semester only.
- FREN 2303** **Introduction to French Literature I** (3-3-0)
CB 1609015313
 This course is an introduction to French Literature through readings representative of this culture. This level covers literary movements from the Middle Ages through the 18th Century, with selections from the major writers. Prerequisite: FREN 2311 and FRENCH 2312.
- FREN 2304** **Introduction to French Literature II** (3-3-0)
CB 1609015313
 This course is an introduction to French Literature through readings representative of this culture. This level covers literary movements from the 19th and 20th centuries, with selections from the major writers. The student will learn the basic tools and terms of literary analysis. Prerequisite: FREN 2311 and 2312.

GEOGRAPHY (GEOG)

Geography broadens knowledge and understanding of the physical world of the people who inhabit it. It can be of special value to those planning to be elementary teachers and secondary social science teachers.

- GEOG 1301** **Physical Geography** **CORE** (3-3-0)
CB 4507015125
 A systematic introductory examination of the various components of the physical environment. Discussions will include an examination of the mechanics of selected physical elements, their resultant global patterns, and human reaction to and interaction with these elements. Earth/Sun relationships, map and globe skills, components of weather, weather processes and their measurement, climatic elements and control factors, and climate as a factor of physical environment are considered. Also covered are landforms and soil formation with flora and fauna as agents.
- GEOG 1303** **General World Geography** **CORE** (3-3-0)
CB 4507015325
 A regional study of eight major world regions-Europe, USSR, Middle East, the Orient, the Pacific World, Africa, Latin-America, and Anglo-America, with emphasis on location, world importance, population, problems, potentialities, existing relations and organizations among the countries of the world.

GEOLOGY (GEOL)

GEOL 1305 Environmental Geology (3-3-0)
CB 0301035301

This course covers the use of geologic information and risk analysis in evaluating major decisions that will have environmental effects. Examination of geologic factors important to city and regional planning, land capability studies, and assessment of geologic hazards including earthquakes, volcanoes, soil erosion and sediment pollution, floods, groundwater depletion and pollution, landslides, waste disposal, and coastal problems will be stressed. Prerequisite: GEOL 1403. To Be Arranged.

GEOL 1401 Earth Sciences I CORE (4-3-3)
CB 4006015103

This course is the same as PHYS 1417 and is a survey of the natural processes at work in the atmosphere, lithosphere, hydrosphere and biosphere of Earth's place in the universe. It is designed to give the student an introduction to astronomy, geology, oceanography and meteorology. It is required for elementary education certification for students transferring to TAMU. It may also fulfill four of the eight or 12 hours of science requirements for some degree plans (check with your advisor and/or college of transfer). It is not for students majoring or minoring in science. This course is also listed as PHYS 1417. Prerequisite: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Fall, Spring.

GEOL 1403 Physical Geology CORE (4-3-3)
CB 4006015103

This course covers basic principles of geology: earth materials, structure, land forms, mineral and fuel resources; earth processes including plate tectonics, volcanism, earthquakes, weathering, erosion, and deformation. Laboratory work includes study of common rocks and minerals, and topographic maps. Prerequisites: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Fall.

GEOL 1404 Historical Geology CORE (4-3-3)
CB 4006015103

This course is an introduction to the geological history of the earth, geologic time, relative and absolute dating methods, stratigraphic principles, the origin of life, changes on the earth's surface and development of organisms through geologic time. Laboratory work includes interpretation of the fossil record and geologic maps. Prerequisite: GEOL 1403. Spring.

GEOL 2389 Academic Cooperative in Geology (3-2-3)
CB 4001015303

The course involves practical hands-on research experience in geology. This will be accomplished by a cooperative work experience in a university, industrial, medical, or government facility working with trained scientists to solve a research problem in geology. Prerequisite: GEOL 1401 or GEOL 1403.

GOVERNMENT (GOVT)

GOVT 2305 Federal Government CORE (3-3-0)
CB 4510025125

A survey of national government in the United States with emphasis on the Constitution. Topics include European background, federal-state and interstate rela-

tions, rights and obligations of citizens, political parties, group organization, the legislative process, the executive, judicial, and administrative functions in federal government.

**GOVT 2306 Texas Government CORE (3-3-0)
CB 4510025125**

An analysis will be done of local and state government in Texas. Topics will include: the history of Texas governments, different state constitutions, political parties, interest groups, citizenship, the bureaucracy, the legislature, governor, court system, county and municipal organization and current problems of local governments. Reference to other governments will be made.

HEALTH INFORMATION TECHNOLOGY (HITT)

HITT 1301 Health Data Content and Structure (3-3-0)

Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information. Instruction in delivery and organizational structure to include content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms and screens.

Learning Outcomes: The student will interpret health record content; identify documentation requirements; describe health information management department function and purpose; differentiate the various types of health care facilities and their records; and identify the various licensing and regulatory agencies in the healthcare industry. Co-requisite MDCA 1302.

HITT 1441 Coding and Classification Systems (4-3-2)

Application of basic coding rules, principles, guidelines, and conventions.

Learning Outcomes: The student will identify different nomenclatures and classification systems and assign codes using appropriate rules, principles, guidelines, and conventions. Prerequisite HITT 1301 and Co-requisite HITT 2435.

HITT 2435 Coding and Reimbursement Methodologies (4-3-2)

Development of advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding perspective payment systems and methods of reimbursement.

Learning Outcomes: The student will sequence codes according to established guidelines and standards; demonstrate knowledge in reimbursement methodologies. Prerequisite HITT 1441.

HEALTH PROFESSIONS (HPRS)

HPRS 1304 Basic Health Profession Skills (3-3-0)

A study of concepts that serve as the foundation for health profession courses. Topics include client handling and safety issues, basic client monitoring, and health documentation methods.

Learning Outcomes: The student will identify and comply with Occupational, Safety and Health Administration (OSHA) guidelines and universal precautions; and identify and respond to basic medical emergencies. The student will perform client monitoring skills; and perform effective health care documentation.

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- HPRS 2300 Pharmacology for Health Professions (3-3-0)**
A study of drug classifications, actions, therapeutic uses, adverse effects, methods of administration, client education, and calculation of dosages.
- Learning Outcomes: The student will categorize the classification of drugs; describe the therapeutic use and the adverse effects of drugs; identify implications for practice for each drug; and calculate drug dosages.
Prerequisites: MATH 1332 or PHRA 1209, MDCA 1313, MDCA 1409.
- HPRS 2331 General Health Professions Management (3-3-0)**
Exploration of the management concepts necessary for effective health profession operations.
- Learning Outcomes: The student will define health care management terms; describe supervisor and supervisory roles; demonstrate management of financial and personnel operations; discuss regulatory/legal process in health care management. The student will discuss leadership and marketing in health care management; explain components of quality assurance; discuss current health care trends; understand the effect of diversity on health care management; and define leadership and marketing.
- HPRS 2301 Pathophysiology (3-3-0)**
Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries.
- Learning Outcomes: The student will identify the fundamental characteristics of common diseases and conditions; distinguish the physical, psychosocial, and cognitive characteristics of various diseases and conditions; discuss the environmental factors of common diseases and conditions; and recognize the implications of therapeutic interventions for common diseases and conditions.
Co-requisite MDCA 2663.

**HEATING, AIR CONDITIONING & REFRIGERATION
(HART) (MAIR) (007221)**

- HART 1391 Special Topics in Heating Air Conditioning, and Refrigeration (3-2-4)**
This course is designed to cover special topics in the sizing of Air Cond./Heating and Refrigeration equipment. Areas in heat load and cooling load estimating will be studied students will be provided training calculations in sizing Air Cond./Refrigeration equipment.
- HART 1401 Electricity Principles (4-3-4)**
Principles of electricity as required by HVAC technicians including proper use of test equipment, A/C, and D/C circuits, and component theory and operation.
- HART 1403 A/C Control Principles (4-3-4)**
A basic study of electrical, pressure, and temperature controls including motor starting devices, operating relays, and troubleshooting safety controls and devices. Emphasis on use of wiring diagrams to analyze high and low voltage circuits. A review of Ohm's laws as applied to A/C controls and circuits.

HART 1407	<p>Refrigeration Principles (4-3-2)</p> <p>An introduction to the refrigeration cycle, basic thermodynamics, heat transfer, temperature/pressure relationship, safety refrigeration containment, and refrigeration components.</p>
HART 1441	<p>Residential Air Conditioning (4-3-4)</p> <p>A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems.</p>
HART 1445	<p>Gas and Electric Heating (4-3-4)</p> <p>A study of the procedures and principles used in servicing heating systems including gas fired and electric furnaces.</p>
HART 2280	<p>Cooperative Education Heating, Air Conditioning, & Refrigeration CAPSTONE (2-1-8)</p> <p>Career related activities encountered in the student's area of specialization are offered through a cooperative agreement between the college, employer, and student. Under supervision of the college and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the paid work experience. This course may be repeated if topics and learning outcomes vary.</p>
HART 2341	<p>Commercial Air Conditioning (3-2-4)</p> <p>A study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less.</p>
HART 2349	<p>Heat Pumps (3-2-4)</p> <p>A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems.</p>
HART 2431	<p>Advanced Electricity (4-3-3)</p> <p>Advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment including detailed instruction in motors and power distribution and introduction to solid state devices.</p>
HART 2436	<p>Troubleshooting (4-3-4)</p> <p>An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and systems problems including conducting performance tests.</p>
HART 2438	<p>Air Conditioning Installation/Service (4-3-4)</p> <p>A study of air conditioning system installation, refrigerant piping, condensate disposal, and air cleaning equipment with emphasis on service, troubleshooting, performance testing, and repair techniques.</p>
HART 2442	<p>Commercial Refrigeration (4-3-4)</p> <p>Theory of and practical application in the maintenance of commercial refrigeration; high, medium and low temperature applications and ice machines.</p>
HART 2445	<p>Air Conditioning Systems Design (4-3-4)</p> <p>A 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.</p>

MAIR 1449 Refrigerators, Freezers, Window Air Conditioners (4-3-4)
 Theory, sequence of operation, components and repair, electrical schematics, and troubleshooting electronic components in air conditioning and refrigeration. Emphasis on safety for the electrical, mechanical, and sealed systems.

HISTORY (HIST)

HIST 1301 United States History I CORE (3-3-0)
CB 5401025125
 Pre-Columbian and Native American Civilizations; discovery; Spanish and Portuguese conquests in the Americas; English, French, and Dutch in America. The English Colonies in America; War of Independence; establishment of the new nation, problems of the formative period, sectionalism and nationalism, industrialization, western development; cultural growth; and Civil War Reconstruction. This course may be taken in the freshman or sophomore year.

HIST 1302 United States History II CORE (3-3-0)
CB 5401025125
 Continuation of HIST 1301. Settlement of the American West; growth of national ideas; party government and public interests; industrial development; labor problems and agrarian unrest; changing international policies; war and peace; problems of agriculture, business, and government; cultural progress and attempts at social cooperation; world problems and trends. This course may be taken in the freshman or sophomore year.

HIST 2301 Texas History CORE (3-3-0)
CB 5401025225
 A history of Texas from pre-European to contemporary times. Includes a discussion of the cultural influences of the Indians, the Spanish, and the Anglo-Americans as well as the multi-ethnic character of the Lone Star State's population. Traces the political and economic evolution of the state from the colonial period through the revolution and the republic periods to contemporary times. Emphasis on the history of South Texas and Laredo.

HIST 2321 World Civilizations I CORE (3-3-0)
CB 5401015325
 A study of the ancient civilizations of India, China, Japan, Egypt, Mesopotamia, Greece, the Roman Republic and Empire, the Barbarian West, Feudalism and the Rise of Feudal Monarchy, the Renaissance and Reformation, the Expansion of Europe, and the Age of Louis XIV. World Geography (GEOG 1303) is a complementary subject to World Civilization (HIST 2321) and is suggested as an elective. Fall.

HIST 2322 World Civilizations II CORE (3-3-0)
CB 5401015325
 A study of the Age of Enlightenment, the French Revolution and the Age of Napoleon, the Industrial Revolution, the Unification of Italy and Germany, European Imperialism, World War I, the Triumph of Communism in Russia, and Triumph of Fascism in Italy and Germany, World War II, the Cold War, and the Emergence of Asia, Africa, and Latin America. World Geography has use as a complementary subject to World Civilization students and is suggested as an elective. Spring.

HUMAN DEVELOPMENT (HUMD)

- HUMD 1170 Interpersonal Skills (1-1-0)**
CB 2310015435
 Principles of psychology designed to help the student identify personal strengths and develop basic interpersonal skills.
- HUMD 1370 Basic Processes of Interpersonal Relationships (3-3-0)**
CB 4216015140
 This course is designed to help the student increase self-awareness and learn to relate more effectively to others. Using both the theoretical and experiential approach, students are made aware of their feelings, values, attitudes and behaviors. The course content focuses on the role of self-concept, listening, language, non-verbal behavior, perception, emotions, and conflict resolution in developing communication skills.

IMPORT-EXPORT MANAGEMENT (IBUS) (005629)

- IBUS 1301 Principles of Imports/Exports I (3-3-0)**
 A study of export management processes and procedures. Topics include governmental controls, licensing of products, documentation, commercial invoices, and traffic procedures. Application to human and public relations, management of personnel, finance, and accounting procedures.
- IBUS 1302 Principles of Imports-Exports II (3-3-0)**
 The practices and processes of import management operations, including government controls. Skill development in the preparation and understanding of import documents such as customs invoices, packing lists, and commercial invoices.
- IBUS 1305 Introduction to International Business & Trade (3-3-0)**
 The techniques for entering the international marketplace. Emphasis on the impact and dynamics of sociocultural, demographic, economic, technological, and political-legal factors in the foreign trade environment. Topics include patterns of world trade, internationalization of the firm, and operating procedures of the multinational enterprise.
- IBUS 1349 International Information Systems (3-3-0)**
 A course in managing information systems and technology for multinational corporations. Skill development in the use of appropriate software and the National Trade Data Base. Topics include the role of global strategic information systems as applied to problem solving and current transportation and customs software.
- IBUS 1354 International Marketing Management (3-3-0)**
 Analysis of international marketing strategies using market trends, costs, forecasting, pricing, sourcing, and distribution factors. Development of an international export/import marketing plan.
- IBUS 1378 Spanish for Import-Export (3-3-0)**
 The study of terminology used in transportation, freight forwarding, and brokerage businesses. Course will cover oral and written communication. Topics include correspondence formats, phone etiquette, negotiations, and sales presentations. Prerequisite: Two years of high school Spanish or credit for SPAN 1412.

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IBUS 1466, 1467	Practicum-International Business	CAPSTONE	(4-1-27)
	Practical general workplace training supported by an individualized learning plan developed by the employer, college, and student.		
IBUS 2375	Fundamentals of Commodity Classifications		(3-3-0)
	This course will provide instruction on the history of the Harmonized System of classifying commodities world-wide, and how the different nations agreed on this method to expedite the classification process. Topics will include: general rules used in interpretation of the codes, discussion on the different schedules and import tariffs, and the discussion of the different sets, accessories, and parts to the coding system. Fall. Prerequisite: IMEX 1302.		
LMGT 1319	Introduction to Business Logistics		(3-3-0)
	A systems approach to managing activities with traffic, transportation, inventory management and control, warehousing, packaging, order processing, and materials handling.		
LMGT 1323	Domestic & International Transportation Management	CAPSTONE	
	An overview of the principles and practices of transportation and its role in the distribution process. Emphasis on the physical transportation systems involved in the United States as well as on global distribution systems. Topics include carrier responsibilities and services, freight classifications, rates, tariffs, and public policy and regulations. Also includes logistical geography and the development of skills to solve logistical transportation problems and issues.		
OSHT 2309	Safety Program Management		(3-3-0)
	A study of the Occupational Safety and Health Act, cost analysis of accidents, records and record keeping, reporting, job safety analysis, and fundamentals of safety training. An introduction to the Occupational Safety and Health Administration's (OSHA) General Industry Standards and an overview of the more frequently cited violations in recent years.		

KINESIOLOGY (KINE)*

KINE 1101	Tumbling		(1-1-2)
		CB 3601085123	
	Fundamental instruction and development of elementary skill techniques in tumbling and stunts. Spring and Fall.		
KINE 1102	Football I		(1-1-2)
		CB 3601085123	
	Instruction in the rules and fundamental skills of football. Basic offensive and defensive team strategies are covered. Fall.		
KINE 1103	Archery		(1-1-2)
		CB 3601085123	
	Skill development in basic target and field shooting with instruction in safety and scoring procedures. Every other Spring.		

KINE 1104	Beginner's Horseback Riding I	(1-1-2) CB 3601085123
	Fundamental instruction and development of basic riding skills and safety. Every other Fall.	
KINE 1105	Recreational Game Activities	(1-1-2) CB 3601085123
	Develop skills and interest in leisure time activities that have recreational value. The activities offered are table tennis, horseshoes, and badminton. Every other Spring.	
KINE 1106, 1107	Self Defense Aikido I, II	(1-1-2) CB3601085123
	Instruction and practice in the ancient art of Japanese Aikido. The purpose of the course is to have students work at an individual pace to understand the principles and purposes of introducing change into systems of energy. Fall and Spring.	
KINE 1108	Pilates I	(1-1-2) CB 3601085123
	This course is to increase strength, flexibility, range of motion, coordination and ease of movement through participation in the pilates method of physical conditioning. Fall, Spring, and Summer.	
KINE 1109	Handball	(1-1-2) CB 3601085123
	Instruction in the development of fundamental skills and rules in a hand batted sport. Every other Fall.	
KINE 1110	Volleyball I	(1-1-2) CB 3601085123
	Instruction in rules and fundamental skills of volleyball, basic offensive and defensive team strategies are learned. Fall and Spring.	
KINE 1111	Squash I	(1-1-2) CB 3601085123
	Squash is a form of handball that is played by hitting a small rubber ball with a racket. This course will cover basic techniques: serving, returning, and lead-up games. Fall, Spring, and Summer Session I.	
KINE 1112	Angling I	(1-1-2) CB 3601085123
	Angling is a fishing sport. The basic skill in learning to become an angler is casting. There are types of casting: Fly and bait. This course will cover only bait. Spring and Summer Session I.	
KINE 1113, 1114	Weight Training I, II	(1-1-2) CB 3601085123
	Instruction and practice in proper techniques of strength flexibility and aerobic development based upon knowledge of basic training principles. Course also stresses the use of proper body mechanics and safety. Fall, Spring, and Summer I.	



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- KINE 1115** **Beginner's Swimming** (1-1-2)
CB 3601085123
Development of the basic strokes along with deep water orientation and safety and rescue skills. Flexible Entry for Fall, Spring, and Summer I & II.
- KINE 1116** **Intermediate Swimming** (1-1-2)
CB 3601085323
Review of the basic strokes and development of advanced strokes. Instruction and practice in standard Red Cross Lifesaving techniques. Prerequisite: KINE 1115 or instructor's approval. Flexible Entry for Fall, Spring, and Summer I & II.
- KINE 1117** **Rhythms** (1-1-2)
CB 3601085123
An introductory course with instruction and practice in modern dance, folk dance, and social dancing. Some time devoted to muscle toning. Every other Fall.
- KINE 1118/1119** **Badminton I, II** (1-1-2)
CB 3601085123
Instruction and development of basic and advanced skills including strategies for singles, doubles and mixed doubles. Fall, Spring, and Summer Session I.
- KINE 1120** **Flag Football I** (1-1-2)
CB 3601085123
Fundamental skills for beginners in flag football through practice and participation. Every other Fall.
- KINE 1121, 1122** **Varsity Volleyball I, II** (1-1-2)
CB 3601085123
Participation in intercollegiate volleyball through regularly scheduled practices and match play. Prerequisite: Instructor approval. Fall and Spring.
- KINE 1123, 1124** **Self Defense I, II** (1-1-2)
CB 3601085123
Instruction and practice in standard self-defense. The purposes of the course are to: develop physical fitness and strength, develop protective skills, and develop self-confidence. Fall and Spring.
- KINE 1125, 1126** **Varsity Tennis I, II** (1-1-2)
CB 3601085123
Participation in intercollegiate tennis through regularly scheduled practice sessions and tournaments. Prerequisite: Instructor approval. Fall and Spring.
- KINE 1127, 1128** **Varsity Baseball I, II** (1-1-2)
CB 3601085123
Participation in intercollegiate baseball through regularly scheduled practice sessions and games. Prerequisite: Instructor's approval. Fall and Spring.
- KINE 1129, 2129** **Water Aerobics** (1-1-2)
CB 3601085123
Development of fundamental water aerobics skills necessary for cardiovascular fitness. Flexible Entry Fall and Spring, Summer I & II.

KINE 1130	Water Aerobics for the Atypical Student	(1-1-2) CB 3601085123
	Development of fundamental water aerobics skills for students with limited psychomotor skills. Flexible Entry Fall and Spring, Summer I & II.	
KINE 1131, 2131	Aerobic Activities I, II	(1-1-2) CB3601085123
	Instruction and practice in a variety of activities including aerobic dance, to enhance fitness of the heart, lungs, and vascular system. Spring and Fall.	
KINE 1132	Softball	(1-1-2) CB 3601085123
	Instruction in basic fundamentals of softball. Course will promote safety and the following techniques: catching, hitting, pitching, base running, fielding and scoring plus general ball play. Fall, Spring and Summer.	
KINE 1133, 1134	Bowling I, II	(1-1-2) CB 3601085123
	Fundamental instruction and practice in the basic skills in elementary and intermediate play at a local bowling alley. Additional fees required. Fall and Spring.	
KINE 1135, 1136	Golf I, II	(1-1-2) CB 3601085123
	Development and practice of the fundamental skills with instruction in rules and scoring. Fall and Spring.	
KINE 1137, 1138	Basketball I, II	(1-1-2) CB3601085123
	Instruction in rules and fundamental skills of basketball. Basic offensive and defensive team strategies are covered. Fall, Spring, and Summer Session I.	
KINE 1139	Jogging I	(1-1-2) CB 3601085123
	Fundamental instruction and practice in the basic principles and techniques of effective jogging. Fall and Spring.	
KINE 1140	Soccer I	(1-1-2) CB 3601085123
	Instruction in basic fundamentals of soccer play. Course will promote safety and the following techniques: dribbling, trapping, shooting, and field generalship. Fall, Spring, and Summer I or II.	
KINE 1141	Beginner's Cycling	(1-1-2) CB 3601085123
	Fundamental instruction and practice in the technique of bicycle riding and racing with an emphasis on safety and bicycle maintenance. Students must provide own equipment. Every other Spring.	
KINE 1142	Soccer II	(1-1-2) CB 3601085123
	Review basic fundamental of soccer play. Course will promote safety and the following techniques: dribbling, trapping, shooting, and field generalship. Fall, Spring, and Summer I or II.	

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KINE 1143, 1144	Beginner's Tennis	(1-1-2) CB 3601085123
	Instruction in the development of fundamental skills and rules. Fall, Spring and Summer I & II.	
KINE 1145	Cross Country I	(1-1-2) CB 3601085123
	Fundamental instruction and practice in the basic principles and techniques of effective cross-country activities. Fall and Spring.	
KINE 1147, 1148	Power Walking I, II	(1-1-2) CB3601085123
	Fundamental instruction and development of proper walking techniques. Fall, Spring, and Summer I, II.	
KINE 1149	Racquetball	(1-1-2) CB 3601085123
	Fundamental instruction in the development of basic skills and rules of racquetball. Fall, Spring, and Summer I.	
KINE 1150	Intermediate Racquetball	(1-1-2) CB 3601085123
	Review of fundamental skills with an emphasis on advanced techniques and strategies of play. Fall, Spring, and Summer I.	
KINE 1164	Introduction to Physical Fitness and Sports	(1-1-0) CB 3105015223
	Orientation to the field of physical fitness and sport. Include the study and practice of activities and principles that promote physical fitness.	
KINE 1253	Lifeguard Training	(2-2-2) CB 3601085323
	Participation and instruction in advanced aquatic activities. Prerequisite: demonstrate swimming skills.	
KINE 1301	Introduction to Physical Fitness and Sports	(3-3-0) CB 3105015223
	A course designed to orient the student with the history, principles, terminology, aims and objectives, current status, and the scope of modern programs in physical education, health and recreation. Fall and Spring.	
KINE 1304	Personal/Community Health I	(3-3-0) CB 5103015116
	A fundamental course in principles and techniques of healthful living in today's world. Students will learn how to cope with personal health problems. Information on nutrition, diets and menu planning will be presented. Aerobic and anaerobic principles and techniques for keeping in good optimal health will be taught. Fall and Spring.	
KINE 1305	Personal/Community Health II	(3-3-0) CB 5103015116
	The principles of personal health, nutrition, mental health, stimulants and narcotics, exercise, sleep and rest. Also, community health-sanitation, community services, and public health agencies are discussed. Every other Fall.	

KINE 1306	First Aid	(3-3-0) CB 5103015316
	Training in advanced first aid procedures and cardiopulmonary resuscitation. Students will receive the American Red Cross certification on successful completion of the course. Fall, Spring and Summer I.	
KINE 1308	Sports Officiating I	(3-2-2) CB 1202045109
	Instruction in rules, interpretation, and mechanics of officiating selected sports. Flag football, volleyball and tennis.	
KINE 1309	Sports Officiating II	(3-2-2) CB 1202045109
	Instruction in rules, interpretation, and mechanics of officiating selected sports. Basketball, softball, and raquetball. Spring.	
KINE 1321	Coaching/Sports/Athletics I	(3-3-0) CB 3105065123
	Study of history, theories, philosophies, rules, and terminology of team sports. Include coaching techniques. Spring.	
KINE 1322	Coaching/Sports/Athletics II	(3-3-0) CB 3105065123
	Study of history, theories, philosophies, rules, and terminology of lifetime competitive sports. Include coaching techniques. Fall.	
KINE 1331	PE for Elementary Education Majors	(3-3-0) CB 3105015223
	An overview of the program of activities in elementary school physical education. Includes the study and practice of activities and principles that promote physical fitness with an emphasis on historical development, philosophical implications, physical fitness, and kinesiology. Fall and Spring.	
KINE 1338	Physical Fitness	(2-1-3) CB 3105015123
	Concepts and use of selected physiological variables of fitness, individual testing and consultation, and the organization of sports and fitness programs. Fall and Spring.	
KINE 1346	Drug Use and Abuse	(3-3-0) CB 5115045216
	Study of the use and abuse of drugs in today's society. Emphasizes the physiological, sociological, and psychological factors.	
KINE 2104	Advanced Horseback Riding	(1-1-2) CB 3601085123
	Fundamental instruction and development of western riding techniques in an open setting. Fall, Spring, and Summer I & II.	



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KINE 2106	Advanced Self Defense Aikido	(1-1-2) CB 3601085123
	Advanced techniques in instruction and practice in the ancient art of Japanese Aikido. The purpose of the course is to have students work at an individual pace to understand the principles and purposes of introducing change into systems of energy. Prerequisite: KINE 1106, 1107. Fall and Spring	
KINE 2107	Advanced Self Defense Aikido II	(1-1-2) CB 3601085123
	Review techniques with emphasis on further advanced techniques. Promote participation on internal and external tournament in community sponsored activities. Prerequisite: KINE 1106, 1107, 2106. Fall and Spring	
KINE 2108	Pilates II	(1-1-2) CB 3601085123
	This course is to increase strength, flexibility, range of motion, coordination and ease of movement through participation in the pilates method of physical conditioning. Fall, Spring, and Summer.	
KINE 2110	Volleyball II	(1-1-2) CB 3601085123
	Instruction in rules and fundamental skills of volleyball, basic offensive and defensive team strategies are learned. Fall and Spring.	
KINE 2111	Squash II	(1-1-2) CB 3601085123
	Squash is a form of handball that is played by hitting a small rubber ball with a racquet. This course will review basic techniques and introduce game play. (Singles and doubles). Fall, Spring, and Summer Session I.	
KINE 2112	Angling II	(1-1-2) CB 3601085123
	Angling is a fishing sport. This course will further enhance techniques of bait and spin casting. Spring and Summer Session I.	
KINE 2113, 2114	Weight Training III, IV	(1-1-2) CB 3601085123
	Continued development of proper techniques in flexibility and aerobics applying the physiological principles of weight training. Fall, Spring, and Summer I.	
KINE 2118	Advanced Badminton	(1-1-2) CB 3601085123
	Review fundamental skills with emphasis on advanced techniques and strategies in tournament play. Fall, Spring, and Summer Session I.	
KINE 2119	Championship Badminton	(1-1-2) CB 3601085123
	Review fundamental skills with emphasis on advanced techniques. Promote internal tournament play. Fall, Spring, and Summer Session I.	

KINE 2120	Flag Football II	(1-1-2) CB 3601085123
	Review of rules and fundamental skills of flag football. Basic offensive and defensive team strategies are covered. Every other Fall.	
KINE 2121, 2122	Varsity Volleyball III, IV	(1-1-2) CB 3601085123
	Continued participation in intercollegiate volleyball through regularly scheduled practice sessions and match play. Prerequisite: Instructor approval. Fall and Spring.	
KINE 2123	Advanced Self-Defense	(1-1-2) CB3601085123
	Advance techniques of instruction and practice in self-defense. The purpose of the course is to develop physical fitness and strength, develop protective skills, and develop self-confidence. Prerequisite: KINE 1123, 1124. Fall and Spring.	
KINE 2124	Championship Self-Defense	(1-1-2) CB3601085123
	Review advanced techniques and practice in self-defense. The students will develop physical fitness and strength, protective skills, and self-confidence. Promote internal and external tournaments. Fall and Spring.	
KINE 2125, 2126	Varsity Tennis III, IV	(1-1-2) CB 3601085123
	Continue participation in intercollegiate tennis through regularly scheduled practice sessions and tournaments. Prerequisite: Instructor approval. Fall and Spring.	
KINE 2127, 2128	Varsity Baseball III, IV	(1-1-2) CB 3601085123
	Continued participation in intercollegiate baseball through regularly scheduled practice sessions and games. Prerequisite: Instructor's approval. Fall and Spring.	
KINE 2132	Advanced Softball	(1-1-2) CB3601085123
	Review advanced techniques of instruction and practice in softball and tournament play. Fall, Spring, and Summer I or II.	
KINE 2133	Advanced Bowling	(1-1-2) CB3601085123
	Review fundamental skills with emphasis on advanced techniques and strategies in tournament play. Fall and Spring.	
KINE 2134	Championship Bowling	(1-1-2) CB3601085123
	Review fundamental skills with emphasis on further advanced techniques. Promote tournament play. Fall and Spring.	
KINE 2135	Advanced Golf	(1-1-2) CB3601085123
	Review advanced techniques of instruction and practice in golf and tournament play. Fall and Spring.	

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KINE 2136	Championship Golf	(1-1-2) CB3601085123
	Review instruction in all basic fundamentals of golf, promote safety and tournament play. Fall and Spring.	
KINE 2137	Intermediate Basketball	(1-1-2) CB3601085123
	Review of fundamental skills with an emphasis on basic offensive and defensive team strategies. Fall, Spring, and Summer Session I.	
KINE 2138	Advanced Basketball	(1-1-2) CB3601085123
	Review of fundamental skills with an emphasis on advanced offensive and defensive team strategies and internal tournament play. Fall, Spring, and Summer Session I.	
KINE 2139	Jogging II	(1-1-2) CB3601085123
	Review of fundamental instruction and practice in the basic principles and techniques of effective jogging. Fall and Spring.	
KINE 2140	Advanced Soccer	(1-1-2) CB3601085123
	Review of fundamental skills with an emphasis on advanced techniques and strategies in tournament play. Fall, Spring, and Summer I or II.	
KINE 2141	Intermediate Cycling	(1-1-2) CB 3601085123
	Review of fundamentals with an emphasis on racing techniques such as drafting and sprinting. Prerequisite: KINE 1141 or consent of instructor. Student must provide own equipment. Every other Spring.	
KINE 2142	Championship Soccer	(1-1-2) CB3601085123
	Review fundamental skills with emphasis on advanced techniques. Promote safety internal and external tournament play in community sponsored activities. Fall, Spring, and Summer I or II.	
KINE 2143	Advanced Tennis	(1-1-2) CB3601085123
	Review fundamental skills with emphasis on advanced techniques and strategies in tournament play. Fall, Spring, and Summer I or II.	
KINE 2144	Championship Tennis	(1-1-2) CB3601085123
	Review fundamental skills with emphasis on further advanced techniques. Promote safety, internal and external tournament play in community sponsored activities. Fall, Spring, and Summer I or II.	
KINE 2145	Cross Country II	(1-1-2) CB 3601085123
	Fundamental instruction and practice in the basic principles and techniques of effective cross-country activities. Fall.	

- KINE 2147, 2148 Advanced Power Walking I, II** (1-1-2)
CB3601085123
 Advanced fundamental instruction and proper techniques of walking. Fall, Spring, Summer I, II.
- KINE 2149 Advanced Racquetball** (1-1-2)
CB3601085123
 Review of fundamental skills with emphasis on advanced techniques, strategies, and tournament play of a racquetball. Fall, Spring, and Summer I or II.
- KINE 2150 Championship Racquetball** (1-1-2)
CB3601085123
 Review instruction in all basic fundamentals of raquetball, promote safety, internal and external tournament play in community sponsored activities. Fall, Spring, and Summer I or II.
- KINE 2255 Water Safety** (2-1-2)
CB 3601085323
 Methods and technique for teaching all levels of swimming. Beginner through advance life saving and water safety. Pre-requisite: Current Red Cross Lifeguard Training/CPR. Instructor's certification will be awarded after completion of course. Fall and Spring.
- KINE 2356 Care and Prevention of Athletic Injuries** (3-3-0)
CB 3105035223
 Prevention and care of athletic injuries with emphasis on qualities of a good athletic trainer, avoiding accidents and injuries, recognizing signs and sumptoms of specific sports injuries and conditions, immediate and long-term care of injuries, and administration procedures in athletic training. Spring and Fall.

*LCC uniform is mandatory for KINESIOLOGY activity classes.

LOGISTICS (LMGT)

- LMGT 1319 Introduction to Business Logistics** (3-3-0)
 A systems approach to managing activities with traffic, transportation, inventory management and control, warehousing, packaging, order processing, and materials handling.
- LMGT 1323 Domestic & International Transportation Management** **CAPSTONE**
 An overview of the principles and practices of transportation and its role in the distribution process. Emphasis on the physical transportation systems involved in the United States as well as on global distribution systems. Topics include carrier responsibilities and services, freight classifications, rates, tariffs, and public policy and regulations. Also includes logistical geography and the development of skills to solve logistical transportation problems and issues.



MANAGEMENT (BMGT) (005426)

BMGT 1301	Supervision A study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined.	(3-3-0)
BMGT 1303	Principles of Management Concepts, terminology, principles, theories, and issues in the field of management.	(3-3-0)
BMGT 1305	Communication in Management Basic theory and processes of communication skills necessary for the management of an organization's workforce.	(3-3-0)
BMGT 1313	Principles of Purchasing The purchasing process as it relates to such topics as inventory control, price determination, vendor selection, negotiation techniques, and ethical issues.	(3-3-0)
BMGT 1464, 1465	Practicum (or Field Experience) Operations Management and Supervision Practical general workplace training supported by an individualized learning plan developed by the employer, college and student.	CAPSTONE (4-1-27)
BMGT 2303	Problem Solving & Decision Making Decision making and problem solving processes in organizations, utilizing logical and creative problem solving techniques. Application of theory is provided by experiential activities such as small group discussions, case studies, and the use of other managerial decision aids.	(3-3-0)
BUSG 1341	Small Business Financing A study of the financial structure of a small business. Topics address business finance, including where the funds come from and what they are used for; budgeting including planning and preparing, record keeping, taxation, insurance, and banking.	
BUSG 2307	Legal and Social Environment of Business The role of law in business and society including government regulations of business, legal reasoning, sources of law, social policy, legal institutions, antitrust, security regulations, consumer protection, environmental laws, worker health and safety, employment discrimination, and other laws affecting business.	CAPSTONE (3-3-0)
BUSG 2309	Small Business Management A course on how to start and operate a small business. Topics include facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues.	(3-3-0)
HRPO 1311	Human Relations Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment.	(3-3-0)
HRPO 2301	Human Resources Management Behavioral and legal approaches to the management of human resources in organizations.	(3-3-0)

- MRKG 1301 Customer Relations**
 Topics address general principles of customer service including skills, knowledge, attitudes, and behaviors pertinent to the professional development of the student.
- MRKG 1311 Principles of Marketing (3-3-0)**
 Introduction to basic marketing functions, identification of consumer and organizational needs, explanation of economic, psychological, sociological, and global issues, and description and analysis of the importance of marketing research.
- MRKG 2333 Principles of Selling (3-3-0)**
 Overview of the selling process. Identification of the elements of the communication process between buyers and sellers and examination of the legal and ethical issues of organizations, which affect sales people.
- MRKG 2349 Advertising & Sales Promotion (3-3-0)**
 Introduction to the advertising principles, practices, and multi-media of persuasive communication including buyer behavior, budgeting, and regulatory constraints.

MATHEMATICS (MATH)

Developmental Mathematics

NOTE: Students are placed in developmental or college-level courses based on scores attained on any approved Texas Success Initiative (TSI) placement instrument.

- MATH 0374 Basic Mathematics (3-3-0)**
CB 3201045119
 Topics include whole numbers, fractions, integers, decimals, ratios and proportions, percents, measures, exponents, averages, square roots, interpreting graphs, tables, and charts; two- and three-dimensional geometric figures, and the Pythagorean Theorem. Developmental course.
- MATH 0375 Beginning Algebra (3-3-0)**
CB 3201045119
 Topics include fundamental concepts, linear equations and inequalities, polynomials in one variable, factoring, and rational expressions. Developmental course. Prerequisite: MATH 0374.
- MATH 0376 Intermediate College Algebra (3-3-0)**
CB 3201045119
 Topics include relations and functions, inequalities, factoring, polynomials, rational expressions, and quadratics with an introduction to complex numbers, exponential and logarithmic functions, determinants and matrices, and sequences and series. Developmental course. Prerequisite: MATH 0375.

College Level Mathematics

- MATH 1314 College Algebra CORE (3-3-0)**
CB 2701015219
 Topic includes quadratics; polynomial, rational, logarithmic, and exponential functions; systems of equations; progressions; sequences and series; and matrices and determinants. Prerequisite: MATH 0376.

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MATH 1316	Plane Trigonometry	CORE	(3-3-0) CB 2701015319
	Topics include trigonometric functions, identities, equations, and applications. Prerequisite: MATH 1314.		
MATH 1324	Mathematics for Business & Social Sciences I	CORE	(3-3-0) CB 2703015219
	Topics include systems of linear equations and matrices; inequalities and linear programming; mathematics of finance; and sets and probability. Prerequisite: MATH 1314.		
MATH 1325	Mathematics for Business & Social Sciences II	CORE	(3-3-0) CB 2703015219
	Topics include relations and functions, differential calculus, and integral calculus. Prerequisite: MATH 1314.		
MATH 1332	Contemporary Mathematics I	CORE	3-3-0) CB 2701015119
	Topics may include sets, logic, number systems, number theory, relations, functions, probability and statistics. Appropriate applications are included. Prerequisite: MATH 0376. Fall semester only.		
MATH 1342	Elementary Statistical Methods	CORE	(3-3-0) CB 2705015119
	Topics include presentation and interpretation of data, probability, sampling, correlation and regression, analysis of variance, and the use of statistical software. Prerequisite: MATH 0376.		
MATH 1348	Analytic Geometry	CORE	(3-3-0) CB 2701015519
	Topics include lines, circles, and other conic sections; transformation of coordinates; polar coordinates; and parametric equations. Prerequisite: MATH 1316.		
MATH 1350	Fundamentals of Mathematics I	CORE	(3-3-0) CB 2701015619
	Topics include concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational and real number systems with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4-8) teacher certification. Prerequisite: MATH 1314.		
MATH 1351	Fundamentals of Mathematics II	CORE	(3-3-0) CB 2701015619
	Topics include concepts of geometry, probability, and statistics as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle (4-8) teacher certification. Prerequisite: MATH 1350 or MATH 1314.		
MATH 2412	Precalculus Math	CORE	(4-4-0) CB 2701015819
	Topics include applications of algebra and trigonometry to the study of elementary		

functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. May include topics from analytical geometry. Prerequisite: MATH 1316.

**MATH 2413 Calculus I CORE (4-4-0)
CB 2701015919**

Topics include functions, limits and continuity, derivatives, Mean Value Theorem, application of derivatives, integrals, and The Fundamental Theorem of Calculus. Prerequisite: MATH 1348 or 2412.

**MATH 2414 Calculus II CORE (4-4-0)
CB 2701015919**

Topics include techniques of integration, derivatives and integrals of transcendental functions, application of integrals, infinite sequences, infinite series, indeterminate forms, and improper integrals. Prerequisite: MATH 2413.

**MATH 2415 Calculus III (4-4-0)
CB 2701015919**

Topics include polar coordinates, vector analysis, solid analytic geometry, partial derivatives and multiple integrals. Prerequisite: MATH 2414. Spring and Summer.

MEDICAL ASSISTING (MDCA) (008026)

MDCA 1302 Human Disease/Pathophysiology (3-3-0)

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.

Learning Outcomes: The student will delineate between normal and abnormal physiologic functions of all body systems; identify etiology, signs, and symptoms of diseases of all body systems; and correlate the prognosis, medical treatment, and procedures with patient morbidity and mortality.

Prerequisite MDCA 1409 or BIOL 2401 and 2402 and MDCA 1313.

MDCA 1305 Medical Law and Ethics (3-3-0)

Instruction in principles, procedures, and regulations involving legal and ethical relationships among physicians, patients, and medical assistants. Includes current ethical issues as they relate to the practice of medicine and fiduciary responsibilities.

Learning Outcomes: The student will recognize the importance of and adhere to the Patient's Bill of Rights; define general legal terms as they apply to the practice of medicine; and differentiate between sources and types of law in Texas and the U.S. The student will maintain and manage patient records in an ethical and legal manner; and identify and differentiate among traditional and contemporary views and philosophical principles of bioethics, ethics relevant to medical practice.

Prerequisite MDCA 1313 or acceptance into an Allied Health Program.

MDCA 1313 Medical Terminology (3-3-0)

A study and practical application of a medical vocabulary system. Includes structure, recognition, analysis, definition, spelling, pronunciation, and combination of medical terms from prefixes, suffixes, roots, and combining forms.

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Learning Outcomes: The student will define terms and abbreviations which apply to the structural organization of the body; analyze and identify terms and their components from a list, including prefixes, suffixes, roots, and combining forms; identify correct pronunciation, spelling, and definition of medical terms; and correctly interpret the contents of a written patient scenario. Prerequisite: Minimum requirement: must be eligible for READ 0375.

MDCA 1321 Administrative Procedures (3-2-3)

A course in medical office procedures, including appointment scheduling, medical records creation and maintenance, phone communications, transcriptions, coding, billing, collecting, third party reimbursement, credit arrangements, and use of computer in the medical office.

Learning Outcomes: The student will accurately and efficiently schedule patient appointments; create, document, and maintain patient medical records; correlate accurate coding, billing, collecting, and filing of procedures; and use the computer for basic office functions. Prerequisite ITSC 1409, MDCA 1313, MDCA 1409 and Co-requisites: MRMT 1307 and MDCA 1443.

MDCA 1360 Clinical--Medical Assistant-Administrative (3-0-15)

A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions with and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry. Prerequisites MDCA 1321, MDCA 1443 and MRMT 1307.

MDCA 1361 Clinical-Medical Assistant Clinical (3-0-15)

A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions with and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry. Prerequisites MDCA 1452, MDCA 1517, and HPRS 2300.

- MDCA 1409 Anatomy and Physiology (4-3-2)**
 Emphasis on normal human anatomy and physiology of cells, tissues, organs, and systems with overview of common pathophysiology.
- Learning Outcomes: The student will identify and correlate cells, tissues, organs, and systems of the human body; differentiate normal from abnormal structure and function; and identify all body systems, their organs, and relevant pathophysiology. Co-requisite MDCA 1313 or Approval of an Advisor.
- MDCA 1443 Medical Insurance (4-3-3)**
 Emphasizes accurate ICD-9 and CPT coding of office procedures for payment/reimbursement by patient or third party. Additional topics may include managed care or medical economics.
- Learning Outcomes: The student will accurately code procedures performed during office visits; accurately bill patients or insurance carriers for visits/procedures; and describe and explain the differences/similarities among insurance plans. The student will accurately file third party reimbursement forms; and define HMO, PPO, Managed Care, IPA, PA healthcare delivery systems. Prerequisites: MDCA 1313 and MDCA 1409; Co-requisite: MDCA 1321.
- MDCA 1452 Medical Assistant Laboratory Procedures (4-3-2)**
 Emphasis on common laboratory procedures performed in the physician's office or clinic setting. Includes blood collection, specimen handling, basic urinalysis, identification of normal ranges and electrocardiography.
- Learning Outcomes: The student will demonstrate proper venipuncture and skin puncture technique; demonstrate compliance with Universal Precautions and OSHA guidelines; and properly perform hematocrit, ABO typing, and glucose with a blood glucose meter. The student will properly label and handle all biologic specimens; and properly perform 12 lead electrocardiography. Prerequisites: MDCA 1313, MDCA 1305, MDCA 1409, and HPRS 1304.
- MDCA 1517 Procedures in a Clinical Setting (5-3-6)**
 Emphasis on patient-centered assessment, examination, intervention, and treatment as directed by physician. Includes vital signs, collection and documentation of patient information, asepsis, minor surgical procedures, and other treatments as appropriate for the medical office.
- Learning Outcomes: The student will identify and comply with OSHA guidelines and universal precautions; properly identify and respond to medical emergencies; identify and assist with routine and specialty office exams; and properly perform medical and surgical asepsis and sterile procedures/techniques appropriate for the medical office. Prerequisites: MDCA 1313, MDCA 1305, MDCA 1409, and HPRS 1304, Co-requisites: HPRS 2300.
- MDCA 2663 Clinical--Medical Assistant (6-0-30)**
 A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions with and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry.

Prerequisites: MDCA 1321, MDCA 1517, MDCA 1443, MDCA 1452, and HPRS 2300.

MEDICAL LABORATORY TECHNOLOGY (MLAB) (008028)

MLAB 1201 Introduction to Clinical Laboratory Science (2-1-4)

An introduction to clinical laboratory science, including quality control, laboratory math, basic laboratory equipment, laboratory settings, accreditation and certification.

Learning Outcomes: The student will demonstrate laboratory safety; perform laboratory math; and describe quality control. The student will demonstrate the use of basic laboratory equipment; and explain accreditation and certification. Prerequisite: Acceptance into the Medical Lab Technician Program.

PLAB 1223 Phlebotomy (2-1-4)

Skill development in the performance of a variety of blood collection methods using proper techniques and universal precautions. Includes vacuum collection devices, syringes, capillary skin puncture, butterfly needles and blood culture, and specimen collection on adults, children and infants. Emphasis on infection prevention, proper patient identification, labeling of specimens and quality assurance, specimen handling, processing, and accessioning.

Learning Outcomes: The student will demonstrate knowledge of infection control and safety; demonstrate understanding of quality assurance and the importance of specimen collection in the overall patient care system; and demonstrate knowledge of collection equipment, various type of additives used, special precautions necessary, and substances that can interfere in clinical analysis of blood constituents. The student will demonstrate proper techniques to perform venipuncture and capillary puncture on adults, children, and infants; and demonstrate the knowledge of requisitioning, specimen transport, and specimen processing. Co-requisite: MLAB 1201.

MLAB 1227 Coagulation (2-1-4)

A course in coagulation theory, procedures, and practical applications. Include laboratory exercises that rely on commonly performed manual and semi-automated methods.

Learning Outcomes: The student will demonstrate an understanding of all aspects of the coagulation mechanism; describe disease states associated with abnormal coagulation values; and perform basic laboratory coagulation analysis. The student will evaluate laboratory test outcomes and correlate test results with patient condition(s) and evaluate the suitability of clinical specimens. Co-requisite: MLAB 1415.

- MLAB 1311 Urinalysis and Body Fluids (3-2-4)**
 An introduction to urinalysis and body fluid analysis, including the anatomy and physiology of the kidney, and physical, chemical and microscopic examination of urine, cerebrospinal fluid, and other body fluids.
- Learning Outcomes: The student will evaluate the suitability of clinical specimens; perform a routine urinalysis and explain the principles of each test; and describe the composition, formation, and function of selected body fluids. The student will exhibit an understanding of the anatomy and functions of the renal system; and evaluate laboratory test outcomes and correlated test results with patient condition(s).
 Co-requisite: MLAB 1201.
- MLAB 1331 Parasitology/Mycology (3-2-4)**
 A study of the taxonomy, morphology, and pathogenesis of human parasites and fungi, including the practical application of laboratory procedures.
- Learning Outcomes: The student will discuss basic morphology and physiology of parasites and fungi; classify parasites and fungi; and perform appropriate quality control procedures. The student will perform appropriate laboratory techniques used in the processing of specimens and identification of parasites and fungi; and evaluate laboratory test outcomes and correlate test results with patient condition(s).
 Co-requisite: MLAB 2534.
- MLAB 1335 Immunology/Serology (3-2-4)**
 An introduction to the theory and application of basic immunology, including the immune response, principles of antigen-antibody reactions, and the principles of serological procedures.
- Learning Outcomes: The student will discuss the principles involved in the immune response; describe the structure, function, and characteristics of immunoglobulins; and describe the principles of and perform serological tests. The student will evaluate laboratory test outcomes and relate serology tests to disease or condition associated with each test; and evaluate the suitability of clinical specimens.
 Co-requisite: MLAB 2431.
- MLAB 1361 Clinical Rotation I-Medical Lab Technician (3-0-15)**
 A method of instruction providing detailed education, training, work-based experience, and direct patient/client care generally at a clinical site. Specific detailed learning objectives are developed for each course by faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Course may be repeated if topics and learning outcomes vary.
- Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; and demonstrate legal and ethical behavior, safety practices, and interpersonal and teamwork skills communicating in the applicable language of the occupation and the business or industry.
- Key Concepts: Students will be provided with clinical experiences to gain proficiency and competence in the performance of diagnostic examinations and techniques in clinical chemistry, hematology, coagulation, phlebotomy, and urinalysis.

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Students must demonstrate compliance with standard Quality Assurance programs, specimen processing, and care of equipment. Prerequisites: MLAB1311, MLAB 1201, MLAB 1415, MLAB 2401 and PLAB 1223.

MLAB 1391 Special Topics (3-3-0)

This course emphasizes the emerging technologies utilized in the diagnosis of and the treatment of disease states and/or conditions. Instrumentation utilized will be included in the discussion. Diagnostic case studies will be presented as a means of reviewing pertinent information for the laboratory clinician.

Learning Outcomes: The student will demonstrate the ability to correlate information into a cohesive presentation of a disease process; correlate information obtained from emerging technologies to prove or disprove a diagnosis; and troubleshoot a procedure for possible errors. Prerequisite: All freshman and sophomore MLAB coursework; Co-requisites: MLAB 2362 and MLAB 2338.

MLAB 1415 Hematology (4-3-4)

Introduction to the theory and practical application of routine and special hematology procedures, both manual and automated; red blood cells and white blood cells maturation sequences, and normal and abnormal morphology and associated diseases.

Learning Outcomes: The student will describe basic laboratory techniques used in the hematology section; identify principles and procedures of hematology tests to include sources of error and clinical significance of results; and evaluate normal and abnormal erythrocyte morphology and related diseases. The student will evaluate normal and abnormal leukocyte morphology and related diseases; and perform routine hematology tests to include a CBC and peripheral smear evaluation. Corequisite: MLAB 1227.

MLAB 2338 Advanced Topics in Medical Laboratory (3-3-0)

This course examines the integration of all areas of the clinical laboratory and correlates laboratory test data with diagnostic applications and pathophysiology using critical thinking skills.

Learning Outcomes: Demonstrate knowledge of the principles of clinical laboratory tests and correlate laboratory test data to diagnosis and treatment of disease. Prerequisites: All freshman and sophomore MLAB coursework. Co-requisites: MLAB 2362 and MLAB 1391.

MLAB 2362 Clinical Rotation II-Medical Lab Technician (3-0-16)

A method of instruction providing detailed education, training, work-based experience, and direct patient/client care generally at a clinical site. Specific detailed learning objectives are developed for each course by faculty. On-site clinical instruction, supervision, evaluation, and placement are the responsibility of the college faculty. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; and demonstrate legal and ethical behavior, safety practices, and interpersonal and teamwork skills communicating in the applicable language of the occupation and the business or industry.

Key Concepts: Students will be provided with clinical experiences to gain proficiency and competence in the performance of diagnostic examinations and techniques in immunohematology-transfusion service, serology; microbiology-including parasitology and mycology; and special chemistry. Students must demonstrate compliance with standard Quality Assurance programs, specimen processing, and care of equipment. Prerequisite: MLAB 1331, MLAB 1335, MLAB 1361, MLAB 2431, and MLAB 2534.

MLAB 2401 Clinical Chemistry (4-3-4)

An introduction to the principles and procedures of various tests performed in Clinical Chemistry. Presents the physiological basis for the test, the principle and procedure for the test, and the clinical significance of the test results, including quality control and normal values. Also includes basic chemical laboratory techniques, chemical laboratory safety, electrolytes and acid-base balance, proteins, carbohydrates, lipids, enzymes, metabolites, endocrine function and toxicology.

Learning Outcomes: The student will exhibit a knowledge of human body chemistry levels under healthy and abnormal conditions; evaluate the suitability of clinical specimens; and explain and perform procedures routinely found in a clinical chemistry laboratory, including electrolytes, acid-base balance, proteins, enzymes, carbohydrates, lipids, toxicology, therapeutic drug monitoring, and liver, kidney, and endocrine functions. The student will evaluate laboratory test outcomes and correlate test results with patient condition(s). Co-requisite: MLAB 1415.

MLAB 2431 Immunohematology (4-3-4)

A study of blood antigens and antibodies. Performance of routine blood banking procedures, including blood group and Rh typing, antibody screens antibody identification, cross matching, elution and absorption techniques.

Learning Outcomes: The student will exhibit knowledge of blood group genetics, characteristics of the blood group systems, and the principle of immunology as they relate to immunohematology; evaluate the suitability of clinical specimens; list the requirements for the donation of blood; and describe the preparation, storage, and use of blood components. Using critical thinking skills, the student will evaluate laboratory test outcomes; select additional procedures to be performed; and correlate test results with patient conditions. The student will describe the principles of and perform routine blood bank tests, including blood group and Rh typing, antibody screen, antibody identification, and cross matching. Co-requisite: MLAB 1335.

MLAB 2534 Clinical Microbiology (5-4-4)

Instruction in the theory, practical application, and pathogenesis of clinical microbiology, including collection, setup, identification, susceptibility testing, and reporting procedures.

Learning Outcomes: The student will discuss morphology and physiology of microbes; demonstrate sterile technique; identify and classify microorganisms; and perform antimicrobial susceptibility testing using appropriate quality control procedures. The student will evaluate the suitability of clinical specimens. Using critical thinking skills, the student will evaluate laboratory test outcomes; select additional procedures to be performed; and correlate test results with patient conditions. Co-requisite: MLAB 1331.

MEDICAL RECORDS MANAGEMENT (MRMT)

MRMT 1307 Medical Transcription Fundamentals (3-2-3)

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 transcribing and information processing equipment compatible with industry standards. Designed to develop speed and accuracy.

Learning Outcomes: The student will describe the importance of confidentiality in medical records; explain the purpose and content of medical records; transcribe physician dictation with the aid of reference materials; develop proofreading and editing skills; and increase speed and productivity.

Prerequisite: MDCA 1313, MDCA 1409, and ITSC 1409.

MRMT 2333 Advanced Medical Transcription (3-2-3)

Production of advanced reports of physician dictation with increasing speed and accuracy including history and physicals, consultations, discharge summaries, operative reports, and other medical reports.

Learning Outcomes: The student will use specific formats for advanced dictated medical documents; utilize complex medical references as resource tools; transcribe advanced physician dictation; identify medical inconsistencies and discrepancies; and increase transcription speed and productivity.

Prerequisite MRMT 1307.

MILITARY SCIENCE (MSCI)

- MSCI 1303 Introduction to Basic Military Leadership (3-2-2)**
CB 2901010099
 An introduction to basic military science; basic leadership principles at the lowest organizational level; examines the organization and role of the United States Army at lower levels of command; application of the techniques of conducting individual and small unit drill up to platoon level; study of the history and methods of ceremonial drill; additionally, addresses life skills including physical fitness and time management. Includes a leadership laboratory and weekend field trip.
- MSCI 1304 Basic Military Leadership and Survival (3-2-2)**
CB 2901010099
 A continuation of basic Military science and leadership training with primary emphasis on methods and techniques of survival in various situations; designed to enhance self confidence and physical fitness through active participation in adventure training. Examines basic first aid procedures, supplemented by cardiopulmonary resuscitation. Includes a leadership laboratory and weekend field trip. Prerequisites: MSCI 1303 or approval of Professor Military Science.
- MSCI 2303 Leadership and Intermediate Military Science (3-2-2)**
CB 2901010099
 An application of leadership principles and intermediate military skills, with the emphasis on individual and squad level tactics, advance land navigation, and first aid techniques. Stresses physical fitness and provides adventure training. Includes a leadership laboratory and field trip. Prerequisites: MSCI 1303 and MSCI 1304 or approval of Professor of Military Science.
- MSCI 2304 Leadership and Intermediate Military Science (3-2-2)**
CB 2901010099
 A continuation of the application of leadership principles and intermediate military skills. Management and motivational techniques are studied through placement of students in positions of small unit leadership. Stresses physical fitness and provides adventure training in leadership positions. Includes a leadership laboratory and field trip. Prerequisites: MSCI 1303, MSCI 1304, and MSCI 2303 or approval of Professor of Military Science.



MUSIC (MUSI)

Applied Music Courses (MUAP)

The applied music curriculum is designed to foster maximum development of skill and insight in musical performance. Students are given an opportunity to gain experience in performing before an audience through participation in recital programs. All majors applying for credit in applied music appear before an examining committee at the close of each semester. The examining committee evaluates standing, credit, and grade in applied music. Applied music courses may not be audited.

In addition to regular tuition and fees, a student enrolled in applied music courses is charged a fee as follows:

\$20 per course offering one semester credit with one half-hour individual lesson per week.

\$40 per course offering two semester credits with two half-hour individual lessons per week.

Private instruction in applied music is offered in strings, brass, percussion, woodwinds, keyboard and voice. Courses may be repeated for credit on the recommendation of the appropriate applied music jury.

The one semester credit applied music courses are open to any college student. These courses are designed for (1) students majoring in a discipline other than music; (2) music majors whose proficiency in their principal instrument or voice is not adequate to begin study in the two semester credit courses; and (3) music majors who wish to study a secondary instrument or voice. Students will receive one half-hour private lesson per week and are required to practice a minimum of six hours a week.

The two semester credit applied music courses involve two half-hour private lessons and a minimum of 10 practice hours per week. These courses are designed for (1) students working toward the BM degree with a major in Music Education; (2) students working toward the BA degree with a major or minor in music; and (3) non-majors who demonstrate adequate proficiency.

There are no performance requirements in the one semester credit courses. Students in the two semester credit courses will be required to gain experience in performing before an audience through participation in recital programs. Minimum performance requirements, both instrumental and vocal, are established by the faculty.

All music majors taking applied music courses must appear for a jury examination and in a public recital in order to receive credit. Jury examination will be conducted by the faculty of each applied music area at the end of each semester. Specific examination requirements are subject to periodic review.

See tables for a listing of all 100-level (one-hour credit) and 200-level (two-hour credit) applied music courses.

MUAP (100 LEVEL)

MUAP 1101, 1102, 2101, 2102	VIOLIN	1-0-2	CB 5009035426
MUAP 1105, 1106, 2105, 2106	VIOLA	1-0-2	CB 5009035426
MUAP 1109, 1110, 2109, 2110	CELLO	1-0-2	CB 5009035426
MUAP 1113, 1114, 2113, 2114	BASS	1-0-2	CB 5009035426
MUAP 1115, 1116, 2115, 2116	ELECTRIC BASS	1-0-2	CB 5009035426
MUAP 1117, 1118, 2117, 2118	FLUTE	1-0-2	CB 5009035426
MUAP 1121, 1122, 2121, 2122	OBOE	1-0-2	CB 5009035426
MUAP 1125, 1126, 2125, 2126	BASSOON	1-0-2	CB 5009035426
MUAP 1129, 1130, 2129, 2130	CLARINET	1-0-2	CB 5009035426
MUAP 1133, 1134, 2133, 2134	SAXOPHONE	1-0-2	CB 5009035426
MUAP 1137, 1138, 2137, 2138	TRUMPET	1-0-2	CB 5009035426
MUAP 1141, 1142, 2141, 2122	FRENCH HORN	1-0-2	CB 5009035426
MUAP 1145, 1146, 2145, 2146	TROMBONE	1-0-2	CB 5009035426
MUAP 1149, 1150, 2149, 2150	EUPHONIUM	1-0-2	CB 5009035426
MUAP 1153, 1154, 2153, 2154	TUBA	1-0-2	CB 5009035426
MUAP 1157, 1158, 2157, 2158	XYLOPHONE	1-0-2	CB 5009035426
MUAP 1159, 1160, 2159, 2160	SNARE DRUM	1-0-2	CB 5009035426
MUAP 1161, 1162, 2161, 2162	GUITAR	1-0-2	CB 5009035426
MUAP 1165, 1166, 2165, 2166	ORGAN	1-0-2	CB 5009035426
MUAP 1169, 1170, 2169, 2170	PIANO	1-0-2	CB 5009035426
MUAP 1171, 1172, 2171, 2172	HARPSICHORD	1-0-2	CB 5009035426
MUAP 1173, 1174, 2173, 2174	SYNTHESIZER	1-0-2	CB 5009035426
MUAP 1181, 1182, 2181, 2182	VOICE	1-0-2	CB 5009035426
MUAP 1187, 1188, 2187, 2188	TIMPANI	1-0-2	CB 5009035426
MUAP 1189, 1190, 2189, 2190	DRUM SET	1-0-2	CB 5009035426

MUAP (200 LEVEL)

MUAP 1201, 1202, 2201, 2202	VIOLIN	1-0-2	CB 5009035426
MUAP 1205, 1206, 2205, 2206	VIOLA	1-0-2	CB 5009035426
MUAP 1209, 1210, 2209, 2210	CELLO	1-0-2	CB 5009035426
MUAP 1213, 1214, 2213, 2214	BASS	1-0-2	CB 5009035426
MUAP 1215, 1216, 2215, 2216	ELECTRIC BASS	1-0-2	CB 5009035426
MUAP 1217, 1218, 2217, 2218	FLUTE	1-0-2	CB 5009035426
MUAP 1221, 1222, 2221, 2222	OBOE	1-0-2	CB 5009035426
MUAP 1225, 1226, 2225, 2226	BASSOON	1-0-2	CB 5009035426
MUAP 1229, 1230, 2229, 2230	CLARINET	1-0-2	CB 5009035426
MUAP 1233, 1234, 2233, 2234	SAXOPHONE	1-0-2	CB 5009035426
MUAP 1237, 1238, 2237, 2238	TRUMPET	1-0-2	CB 5009035426
MUAP 1241, 1242, 2241, 2222	FRENCH HORN	1-0-2	CB 5009035426
MUAP 1245, 1246, 2245, 2246	TROMBONE	1-0-2	CB 5009035426
MUAP 1249, 1250, 2249, 2250	EUPHONIUM	1-0-2	CB 5009035426
MUAP 1253, 1254, 2253, 2254	TUBA	1-0-2	CB 5009035426
MUAP 1257, 1258, 2257, 2258	XYLOPHONE	1-0-2	CB 5009035426
MUAP 1259, 1260, 2259, 2260	SNARE DRUM	1-0-2	CB 5009035426
MUAP 1261, 1262, 2261, 2262	GUITAR	1-0-2	CB 5009035426
MUAP 1265, 1266, 2265, 2266	ORGAN	1-0-2	CB 5009035426
MUAP 1269, 1270, 2269, 2270	PIANO	1-0-2	CB 5009035426
MUAP 1271, 1272, 2271, 2272	HARPSICHORD	1-0-2	CB 5009035426
MUAP 1273, 1274, 2273, 2274	SYNTHESIZER	1-0-2	CB 5009035426
MUAP 1281, 1282, 2281, 2282	VOICE	1-0-2	CB 5009035426
MUAP 1287, 1288, 2287, 2288	TIMPANI	1-0-2	CB 5009035426
MUAP 1289, 1290, 2289, 2290	DRUM SET	1-0-2	CB 5009035426

- MUSI 1183 Voice Class I** (1-1-2)
CB 5009085126
 Class instruction in the fundamentals of correct breathing, tone production and diction. Designed for students with little or no previous voice training to aid in developing a pleasing tone quality produced with ease and proper enunciation.
- MUEN 1121, 1122, 2121, 2122 Campus Band** (1-0-5)
CB 5009035526
 A major ensemble which plays contemporary works, marches and orchestral transcriptions. Required of all wind and percussion majors; open to all students with band experience. It includes five lab hours.
- MUEN 1123, 1124, 2123, 2124 Laredo Community College Civic Symphony Orchestra** (1-1-4)
CB 5009035526
 Repertoire studied and performed is selected from wide range of works for full and chamber orchestras. It is required of all string, wind and percussion majors. Membership is open to all orchestral instrument players in the community as well as at the college.
- MUEN 1131, 1132, 2131, 2132 Mariachi Palomino** (1-1-3)
CB 5009035626
 Mariachi Palomino is a performing ensemble for music and non-music majors. Emphasis will be on the traditional wide range of instrumental and vocal of mariachi music. Prerequisite: audition.
- MUEN 1133, 1134, 2133, 2134 Guitar Ensemble** (1-1-3)
CB 5009035626
 A select group of guitarists and other instrumentalists offering experience in the reading and performing of literature for small ensembles. Repertoire studied and performed is selected from works written for instruments of the lute and guitar family, including original compositions by student composer-arrangers. Open to all students with sight reading ability.
- MUEN 1137, 1138, 2137, 2138 Jazz Ensemble** (1-1-3)
CB 5009035626
 Participation in an instrumental ensemble to acquaint students with the techniques of present-day music materials. Prerequisite: consent of instructor.
- MUEN 1139, 2139 Chamber Instrumental Ensemble** (1-1-2)
CB5009035626
 This course is designed to help students develop the rehearsal techniques and musical skills necessary for performing in small instrumental ensemble such as trios, quartets, quintets, etc. It is a way to enrich their lives. They might perform in local community groups, perform at home, or prepare for a musical career.
- MUEN 1141, 1142, 2141, 2142 LCC Chorale Union** (1-1-4)
CB 5009035726
 A choral ensemble which provides members of the community the opportunity to combine their talents with those of collegiate singers to rehearse and perform fine choral literature from all music periods, ranging from the Renaissance to the present. There is one major performance per semester. Members are auditioned by the director at the beginning of the semester.

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MUEN 1143, 1144, 2143, 2144 Mixed Choir (1-0-5)

CB 5009035726

A major performing ensemble of 20-45 voices, including non-music majors. Emphasis is on standard repertoire for concert choir. Several performances are scheduled throughout the semester.

MUEN 1151, 1152, 2151, 2153 LCC Singers (1-0-4)

CB 5009035826

Students interested in chamber and popular music may audition for this select ensemble which numbers 6-15 voices. Several performances are scheduled throughout the semester.

MUEN 1153, 1154, 1155, 1156 Spanish Traditional Group (1-1-3)

CB 5009035826

Students interested in Spanish popular and traditional music may audition for this unique ensemble which numbers 10-20 guitars and voices. Selections in the repertoire include songs from Mexican trios and Rondallas, Spanish Estudiantinas and South American Grupos folkloricos. Several performances are scheduled throughout the semester. Prerequisite: Consent of instructor.

MUEN 1157, 1158, 2157, 2158 Opera Workshop (I, II, III, IV) (1-1-2)

CB 5009085226

A course designed to give students experience in studying, rehearsing, and performing operas and operettas or excerpts from them. Open to all students at Laredo Community College as well as interested members of the community.

MUSI 1162 Vocal Diction I (1-1-1)

CB 5009085326

The study of English and Italian pronunciation for voice students to promote the ability to sing in these languages. No attempt is made to develop knowledge of grammar or vocabulary.

MUSI 1163, 1164 Jazz Improvisation (I, II) (1-1-2)

CB 5009036526

A course to develop skills and techniques in jazz improvisation, a study of different styles with special emphasis on a classroom practicum to apply the material covered.

MUSI 1165 Vocal Diction II (1-1-1)

CB 5009085326

The study of French and German pronunciation for voice students to promote the ability to sing in these languages. No attempt is made to develop knowledge of grammar or vocabulary.

MUSI 1166 Woodwinds Class I (1-1-2)

CB 5009035126

The study of woodwind instruments such as flute, oboe, clarinet, bassoon and saxophone.

MUSI 1168 Brass Class I (1-1-2)

CB 5009035126

The study of the trumpet, trombone, French horn and tuba, including the ability to play scales on these brass instruments.

- MUSI 1181, 1182 Piano Class I, II** (1-1-2)
CB 5009075126
 Class instruction in the fundamentals of keyboard technique for beginning piano students.
- MUSI 1186 Composition I** (1-1-2)
CB 5009045326
 This course offers individual training in composition, music notation, instrumentation and musicality through composition assignments, recording and analysis of scores, as well as discussions on modern composers from 1900 to the present.
- MUSI 1188 Percussion Class I** (1-1-2)
CB 5009035126
 A study of the principal percussion instruments used in the orchestra.
- MUSI 1190 Strings Class I** (1-1-2)
CB 5009035126
 The attainment of skill in the playing of instruments, such as the violin, viola, cello, and bass. The study of a limited repertoire of these instruments and of methods of teaching them; ability to play all scales on the stringed instruments.
- MUSI 1192, 1193 Guitar I, II** (1-1-2)
CB 5009035126
 Class study of the guitar in the first and secondary positions, via chordal accompaniment and some single note playing using free stroke, rest stroke and rasgueado techniques.
- MUSI 1211, 1212 Music Theory I, II** (2-2-1)
CB 5009045126
 A comprehensive program including the elements of music, a study of the principles of chord progressions and phrase harmonization through written exercises, analysis and correlated keyboard projects. These courses must be taken in sequential order. Required concurrent courses: MUSI 1216, 1217. Prerequisites: MUSI 1301 or permission from instructor.
- MUSI 1216, 1217 Elementary Sight Singing and Ear Training I, II** (2-1-2)
CB 5009045626
 Courses designed to solidify the understanding of theoretical principles through the development of aural perception and skills. Exercises in melodic, harmonic and rhythmic dictation as well as drills in sight singing are included. These courses must be taken in sequential order. Required concurrent courses: MUSI 1211, 1212. Prerequisites: MUSI 1301 or permission from instructor.
- MUSI 1301 Fundamentals of Music I** **CORE** (3-3-0)
CB 5009045526
 This course is designed specifically for students interested in music who had little or no theory in high school. The course includes study of the staff, clefs, key signatures, scales, time signatures, notation, meter and rhythm, sight singing, major and minor chords, application of theory of the keyboard, rhythmic, melodic, and harmonic ear training.

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MUSI 1301	Fundamentals of Music I (Piano-Based)	CORE	(3-3-0) CB 5009045526
	This course is designed for non-music majors. Emphasis upon participation and the necessary skills for satisfactory performance in singing, playing instrument (piano), listening, and creating rhythmic responses.		
MUSI 1302	Fundamentals of Music II (Keyboard-Based)	CORE	(3-3-0) CB 5009045526
	Introduction to the use of computers, synthesizers, sequencing and music printing software, and other MIDI (Musical Instrument Digital Interface) devices in the notation, arrangement, composition and performance of music. Prerequisite should be the instructor's consent and/or either the completion of Music Fundamentals, Music Theory, Class Piano or any other music notation course.		
MUSI 1303	Fundamentals of Music (Guitar-Based)	CORE	(3-3-0) CB 5009045526
	Introduction to the elements of music: scales, intervals, keys, triads, elementary ear training, harmony, notation, meter and rhythm using the guitar as the primary learning instrument.		
MUSI 1304	Foundations of Music	CORE	(3-3-0) CB 5009045426
	This course is designed specifically for students interested in developing music skills including singing, pitch recognition, playing classroom and rhythm band instruments, movement and basic rhythm games, and creative activities.		
MUSI 1306	Music Appreciation	CORE	(3-3-0) CB 5009025126
	An elective open to all students. The course deals with how to listen to music. A history of musical styles is presented through recordings, filmstrips, music videos, and live performances.		
MUSI 1308	Music Literature I	CORE	(3-3-1) CB 5009025226
	For music majors. An overview of styles of music by historical periods, composers, and individual works, from medieval through classical.		
MUSI 1309	Music Literature II	CORE	(3-3-1) CB 5009025226
	For music majors. Major composers and their contributions to the literature for music from the nineteenth century to the present.		
MUSI 2181	Piano III		(1-1-2) CB 5009075126
	A course in keyboard harmonization, transposition, sight-reading and continued development of keyboard skills as related to Theory III and Aural Training III. Required of music majors and minors who are not piano majors. This course is to be taken concurrently with applied piano (MUAP).		

**MUSI 2182 Piano IV (1-1-2)
CB 5009075126**

A continuation of Piano III with emphasis on further development of keyboard skills as related to Theory IV and Aural Training IV. Required of music majors and minors who are not piano majors. This course is to be taken concurrently with applied piano (MUAP).

**MUSI 2211, 2212 Music Theory III, IV (2-2-1)
CB 5009045226**

Continuation of MUSI 1211 and 1212. The courses present a broad summary of classical harmony and technique of the 20th century through written exercises, analysis and correlated keyboard projects. Prerequisites: MUSI 1211, 1212. Required concurrent courses: MUSI 2216, 2217. These courses must be taken in sequential order.

**MUSI 2216, 2217 Advanced Sight Singing and Ear Training I, II (2-1-2)
CB 5009045726**

Continuation of MUSI 1216 and 1217. Courses designed to further the understanding of advanced theoretical principles and techniques through related aural exercises, dictation and sight singing. These courses must be taken in sequential order. Prerequisites: MUSI 2211, 2212.

**NURSING ADN (008021)
ASSOCIATE DEGREE NURSING
ASSOCIATE IN APPLIED SCIENCE**

First Semester

RNSG 1205 Nursing Skills I (2-1-3)

Course Description: 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.

Key Concepts: This course provides the student with the fundamental nursing skills used in administering client and family care. Emphasis is placed on the development of motor skills through the use of the nursing process, scientific rationale and safety within a legal and ethical framework. The experiences are simulated in the laboratory. Prerequisites: BIOL 2401, 2402, RNSG 1193, ENGL 1301 and PSYC 2301. *BIOL 2421 prior or concurrent.

RNSG 1309 Introduction to Nursing (3-3-0)

Course Description: Overview of nursing and the role of the professional 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.

Key Concepts: This course provides the student with the fundamental principles upon which nursing practice is based for the nurse as a provider, a coordinator and as a member of the profession. Bio-psycho-sociocultural concepts are introduced as a foundation for subsequent nursing courses. Emphasis is placed on basic human needs, communications, safety, the hospital environment, prevention measures and the nursing process. Prerequisites: BIOL 2401, 2402, RNSG 1193, ENGL 1301 and PSYC 2301. *BIOL 2421 prior or concurrent.

* Concurrent courses usually include the theory and clinical component. If one component is not completed successfully that component must be successfully completed before further progression in the program.

RNSG 1341 Common Concepts of Adult Health (3-3-0)

Course Description: Study of the general principles of caring for selected adult clients and families in structured settings with common medical-surgical health care needs related to each body system. Emphasis on knowledge, judgment, skills, and professional values within a legal/ethical framework.

Key Concepts: This course introduces the student to general concepts of care for adult clients and their families with common medical-surgical health care needs. There is an emphasis on the application of the nursing process. The student is provided with theoretical knowledge needed for the nurse in the role as provider of care for the clients and their families. Prerequisites: RNSG 1205, 1309. *Concurrent with RNSG 1260. BIOL 2421 prior or concurrent.

RNSG 1260 Clinical Nursing (R.N. Training-Introductory Medical-Surgical) (2-0-8)

Course Description: 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.

Key Concepts: This course introduces the student to basic clinical concepts for the care of adult clients and their families with common medical-surgical disorders in a structured health care setting. There is an emphasis on the application of the nursing process by the nurse in the role of provider and manager of care. The student is provided with the opportunity to apply theoretical concepts learned in RNSG 1341. Prerequisites: RNSG 1205, 1309. *Concurrent with RNSG 1341. BIOL 2421 prior or concurrent.

Second Semester

RNSG 1443 Complex Concepts of Adult Health (4-4-0)

Course Description: Integration of previous knowledge and skills related to common adult health needs into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession in the care of adult clients/families in structured health care settings with complex medical-surgical health care needs associated with each body system. Emphasis on knowledge, judgments, skills, and professional values within a legal/ethical framework.

Key Concepts: This course introduces the student to intermediate concepts of care for adult clients and their families with acute medical-surgical health care needs. There is an emphasis on the application of the nursing process. The student is provided with theoretical knowledge in the care of clients with disruptions of the following systems: respiratory, nervous, cardiovascular, endocrine, integumentary, peripheral vascular, gastrointestinal, renal, musculoskeletal and reproductive. Also included are blood dyscrasia, and disorders of the ear and eye. Nutrition, prevention measures, pharmacological concepts, and client safety are integral components. Prerequisites: RNSG 1341, 1260, BIOL 2421. *Concurrent with RNSG 1460, 1144. (Prior to 3rd semester courses RNSG 1301, COSC 1300).

RNSG 1460 Clinical Nursing (R.N. Training-Intermediate Medical-Surgical) (4-0-16)

Course Description: 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.

Key Concepts: This course introduces the student to intermediate clinical concepts for the care of adult clients and their families experiencing acute illness(s) in a struc-

* Concurrent courses usually include the theory and clinical component. If one component is not completed successfully that component must be successfully completed before further progression in the program.

tured health care setting. There is an emphasis on the application of the nursing process by the nurse in the role as the provider, coordinator, and manager of care. The student is provided with the opportunity to apply theoretical concepts learned in RNSG 1443. Prerequisites: RNSG 1341, 1260, BIOL 2421. *Concurrent with RNSG 1443, 1144. (Prior to 3rd semester courses RNSG 1301, COSC 1300).

RNSG 1144 Nursing Skills II (1-0-3)

Course Description: Study of the concepts and principles necessary to perform intermediate or advanced nursing skills; and demonstrate competence in the performance of nursing procedures. Topics include knowledge, judgement, skills and professional values within a legal/ethical framework.

Key Concepts: This course provides the student with the development of intermediate nursing skills used in administering care to adult clients and their families. Emphasis is placed on the development of motor skills through the use of the nursing process, scientific rationale, and safety within a legal/ethical framework. Experiences are simulated in the laboratory. Prerequisites: RNSG 1341, 1260, BIOL 2421. *Concurrent with RNSG 1443, 1460. (Prior to 3rd semester courses RNSG 1301, COSC 1300).

RNSG 1301 Pharmacology (3-3-0)

Course Description: 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.

Key Concepts: This course provides the nursing student with the fundamental principles of pharmacology and the implications and responsibilities for the nurse as a provider of care by integrating the nursing process. Prerequisites RNSG 1341, RNSG 1260, BIOL 2421. Special admission with approval of the A.D.N. Department Chair for LVN graduates, Paramedic graduates, and other health professionals.

Third Semester

RNSG 1146 Legal and Ethical Issues for Nurses (1-1-0)

Course Description: Study of the laws and regulations related to the provision of safe and effective professional nursing care; attention given to the development of a framework for addressing ethical issues; and topics to include confidentiality, the Nursing Practice Act, professional boundaries, ethics, and health care legislation. Prerequisites: RNSG 1443, RNSG 1460, RNSG 1144, RNSG 1301, COSC 1300.

RNSG 2208 Maternal/Newborn Nursing and Women's Health (2-2-0)

Course Description: Study of concepts related to the provision of nursing care for normal childbearing families and those at risk, as well as women's health issues; competency in knowledge, judgment, skill, and professional values within a legal/ethical framework, including a focus on normal and high-risk needs for the childbearing family during the preconception, prenatal, intrapartum, neonatal, and postpartum periods; and consideration of selected issues in women's health.

Key Concepts: This course introduces the student to the concepts of care to maternal/newborn and women's health issues. The nursing process is applied to the antepartum, intrapartum, and immediate postpartum needs of the new family unit. Focus is placed on the bio-psycho-sociocultural needs of the childbearing family

* Concurrent courses usually include the theory and clinical component. If one component is not completed successfully that component must be successfully completed before further progression in the program.

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during the normal and abnormal phases of pregnancy, childbirth, and the newborn period. Also, included selected issues in women's health. Decision-making, legal/ethical responsibilities, prevention measures, and client physical and emotional safety are reinforced. Pharmacological concepts specific to this content are discussed. Prerequisites: PSYC 2314, RNSG 1443, RNSG 1460, RNSG RNSG 1144, RNSG 1301, COSC 1300. *Concurrent with RNSG 2260. SOCI 1301 prior or concurrent.

RNSG 2260 Clinical Nursing (R.N. Training-Maternal/Newborn Nursing & Women's Health) (2-0-8)
Course Description: 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.

Key Concepts: This course introduces the student to clinical concepts for the care of Maternal/Newborn and Women's Health Issues. There is an emphasis on the application of the nursing process by the nurse in the role as the provider, coordinator and manager of care. This course provides a framework that will assist the student in developing a better understanding of the nurse as a member of the profession. The nurse develops different strategies that introduce the client and their families to health promotion and prevention measures. The student is provided with the opportunity to apply theoretical concepts learned in RNSG 2208.

Prerequisites: PSYC 2314, RNSG 1443, RNSG 1460, RNSG 1144, RNSG 1301, COSC 1300. *Concurrent with RNSG 2208. SOCI 1301 prior or concurrent.

RNSG 2201 Care of Children and Families (2-2-0)
Course Description: 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.

Key Concepts: This course introduces the student to the concepts of care to children and their families. There is an emphasis on the nursing process. The student has the opportunity to be in the role of family advocate, teacher and restorer. The student is provided with theoretical knowledge on basic needs of children, measures to promote optimal health, and growth and development. Critical thinking, legal/ethical responsibilities, decision-making, and client physical and emotional safety are reinforced. Pharmacological concepts specific to this content are discussed.

Prerequisites: PSYC 2314, RNSG 1443, RNSG 1460, RNSG 1144, RNSG 1301, COSC 1300. *Concurrent with RNSG 2261. SOCI 1301 prior or concurrent.

RNSG 2261 Clinical Nursing (R.N. Training-Child Health) (2-0-8)
Course Description: 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.

Key Concepts: This course introduces the student to clinical concepts for the care of children and their families. There is an emphasis on the application of the nursing process by the nurse in the role as a provider, coordinator and manager of care. This course provides a framework that will assist the student in developing a better understanding of the nurse as a member of the profession. The nurse develops different strategies that introduce the client and their families to health promotion and prevention measures. The student is provided with the opportunity to apply theoretical concepts learned in RNSG 2201.

* Concurrent courses usually include the theory and clinical component. If one component is not completed successfully that component must be successfully completed before further progression in the program.

Prerequisites: PSYC 2314, RNSG 1443, RNSG 1460, RNSG 1144, RNSG 1301, COSC 1300. *Concurrent with RNSG 2201. SOCI 1301 prior or concurrent.

Fourth Semester

RNSG 2207 Transition to Nursing Practice (2-2-0)

Course Description: Introduction to selected concepts related to the role of the professional nurse as a provider of care, coordinator of care, and member of the profession. Review of trends and issues impacting nursing and health care today and in the future. Topics include knowledge, judgment, skill, and professional values within a legal/ethical framework.

Key Concepts: A lecture/seminar/discussion course that focuses on nursing management concepts, issues, and trends in nursing. Emphasis will be placed on subject matter relating to legal issues, ethical issues, the roles of nurses, political issues, and the leadership and management process. The course assists the student with the role transition to registered nurse. Prerequisites: RNSG 1146, RNSG 2208, RNSG 2260, RNSG 2201, RNSG 2261, COSC 1300, SOCI 1301.

RNSG 2213 Mental Health Nursing (2-2-0)

Course Description: Principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families.

Key Concepts: This course introduces the student to the concepts in the care of clients and their families with psychiatric and mental health disorders. There is an emphasis on the nursing process. The course's key concepts include human personality development; therapeutic communication skills; adaptive and maladaptive patterns of behavior; principles of family intervention; neurophysiology and psychotropic medications; nursing roles relevant to prevention, treatment and rehabilitation of the psychiatric-mental health client; psychopathology. Prerequisites: PSYC 2314, SOCI 1301, COSC 1300, RNSG 1443, RNSG 1460, RNSG 1144, RNSG 1301. Prior or concurrent with 3-Hours Humanities/Fine Arts Course.

RNSG 2262 Clinical Nursing (R.N. Training-Mental Health) (2-0-8)

Course Description: 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.

Key Concepts: This course introduces the student to clinical concepts in the care of clients and their families with psychiatric and mental health disorders. There is an emphasis on the application of the nursing process. The nurse has the opportunity to analyze and integrate the role as provider and manager of care. The nurse also integrates the concepts of decision making in relationship to the coordination of client care. The nurse evaluates their role as a member of the profession. The student is provided with the opportunity to apply theoretical concepts learned in RNSG 2213. Prerequisites: PSYC 2314, SOCI 1301, COSC 1300, RNSG 1443, RNSG 1460, RNSG 1144, RNSG 1301, RNSG 2213. Prior or concurrent with 3-Hours Humanities/Fine Arts Course.

RNSG 2231 Advanced Concepts of Adult Health (Capstone) (2-2-0)

Course Description: Application of advanced concepts and skills for the development of the professional nurse's roles in complex nursing situations with adult clients/families with complex health needs involving multiple body systems in intermediate and critical care settings. Emphasis on knowledge, judgment, skills, and professional values within a legal/ethical framework.

* Capstone Experiences: RNSG 2231/RNSG 2263 are courses taught in the last semester. The learning experiences in these courses result in a consolidation of a student's nursing educational experience. The student will be required to complete a comprehensive examination with a satisfactory score prior to completion of this class. Credentialing NCLEX-RN Exam.

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Key Concepts: This course introduces the student to the concepts of care to complex medical surgical clients and their families. There is an emphasis on the application of the nursing process to explore in-depth the bio-psycho-sociocultural concepts. Other concepts such as prevention, nutrition, client safety and education will be integrated throughout the course content. This learning experience results in a consolidation of a student's educational experience. Pharmacological concepts specific to this content are discussed.

Prerequisites: COSC 1300, RNSG 2208, RNSG 2260, RNSG 2201, RNSG 2261, RNSG1146. Prior or concurrent with 3-Hours Humanities/Fine Arts course. *This is a capstone experience.

RNSG 2263 Clinical Nursing (R.N. Training-Advanced Medical-Surgical) (2-0-8)

Course Description: 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.

The student will be required to complete a comprehensive examination with a satisfactory score prior to completion of this course (refer to the course syllabus).

Key Concepts: This course introduces the student with clinical concepts for the care of adult clients and their families with multiple complex disorders in a structured setting. There is an emphasis on the application of the nursing process. The nurse has the opportunity to analyze and integrate the role as provider and manager of care. The nurse also integrates the concepts of decision making in relationship to the coordination of client care. The nurse evaluates his/her role as a member of the profession. The student is provided with the opportunity to apply theoretical concepts learned in RNSG 2231. Prerequisites: COSC 1300, RNSG 1146, RNSG 2201, RNSG 2207, RNSG 2208, RNSG 2260, RNSG 2213, RNSG 2261, RNSG 2231. Prior or concurrent with 3 Hours Humanities/Fine Arts Course. *This is a capstone experience.

VOCATIONAL NURSING WECM CURRICULUM

SEMESTER I

VNSG 1116 Nutrition (1-1-0)
Introduction to nutrients and their role in proper growth and development and the maintenance of health.

Prerequisite: Admission into the program. Sixteen lecture hours per semester.

VNSG 1304 Foundations of Nursing (3-3-0)
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.

Prerequisite: Admission into the program. Forty-eight lecture hours per semester.

VNSG 1331 Pharmacology (3-3-0)
Fundamentals of medications and their diagnostic, therapeutic, and curative effects. Includes nursing interventions utilizing the nursing process.

Prerequisite: Admission into the program. Forty-eight lecture hours per semester.

VNSG 1423	<p>Basic Nursing Skills (4-2-6)</p> <p>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.</p> <p>Prerequisite: Admission into the program. Thirty-two lecture hours and ninety-six laboratory hours per semester.</p>
VNSG 1400	<p>Nursing in Health & Illness I (4-4-0)</p> <p>Introduction to general principles of growth and development, primary health care needs of the client across the life span, and therapeutic nursing interventions.</p> <p>Prerequisite: Admission into the program. Sixty-four lecture hours per semester.</p>
VNSG 1260	<p>Clinical-Practical Nurse (Introduction) (2-0-8)</p> <p>A health-related work-based learning experience that enables the student to apply specialized occupation theory, skills, and concepts. Direct supervision is provided by the clinical professional.</p> <p>Prerequisites: Admission to the program. One hundred twenty-eight clinical hours per semester.</p>
SEMESTER II	
VNSG 1406	<p>Maternity/Newborn Nursing (4-4-0)</p> <p>A study of the biological, psychological, and sociological concepts applicable to basic needs of the family including childbearing and neonatal care. Topics include physiological changes related to pregnancy, fetal development, and nursing care of the family during labor and delivery and the puerperium.</p> <p>Prerequisites: Concurrent enrollment in VNSG 1160. Successful completion of the Semester I courses with a grade of 75% (C) or better. Sixty-four lecture hours per semester.</p>
VNSG 1160	<p>Clinical-Practical Nurse (Maternal/Newborn) (1-0-3)</p> <p>A health-related work-based learning experience that enables the student to apply specialized occupation theory, skills, and concepts. Direct supervision is provided by the clinical professional.</p> <p>Prerequisites: Concurrent enrollment in VNSG 1406. Maternity/Newborn and successful completion of Semester I courses with a grade of 75% (C) or better. Forty-eight clinical hours per semester.</p>
VNSG 1334	<p>Pediatrics (3-3-0)</p> <p>Study of childhood diseases and childcare from infancy through adolescence. Focus on the care of the well and the ill child utilizing the nursing process.</p> <p>Prerequisite: Concurrent enrollment in VNSG 1161. Successful completion of Semester I courses with a grade of 75% (C) or better. Forty-eight lecture hours per semester.</p>
VNSG 1161	<p>Clinical-Practical Nurse (Pediatrics) (1-0-3)</p> <p>A health-related work-based learning experience that enables the student to apply specialized occupation theory, skills, and concepts. Direct supervision is provided by the clinical professional.</p> <p>Prerequisites: Concurrent enrollment in VNSG 1334 Pediatrics and successful completion of Semester I courses with a grade of 75% (C) or better. Forty-eight clinical hours per semester.</p>

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VNSG 1409 Nursing in Health & Illness II (4-4-1)
Introduction to common health problems requiring medical and surgical interventions.
Prerequisites: Successful completion of Semester I courses with a grade of 75% (C) or better. Sixty-four lecture hours and sixteen laboratory hours per semester.

VNSG 1262 Clinical-Practical Nurse (Medical/Surgical) (2-0-7)
A health-related work-based learning experience that enables the student to apply specialized occupation theory, skills, and concepts. Direct supervision is provided by the clinical professional.
Prerequisites: Concurrent enrollment in VNSG 1409 Nursing in Health & Illness II and successful completion of Semester I courses with a grade of 75% (C) or better. One hundred and twelve clinical hours per semester.

SEMESTER III

VNSG 1410 Nursing in Health & Illness III (4-4-1)
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. The student will be required to complete a comprehensive examination with a satisfactory score prior to completion of this class (refer to Student Handbook/Syllabus).
Prerequisites: Successful completion of Semester II courses with a grade of 75% (C) or better. Sixty-four lecture hours and sixteen laboratory hours per semester.

VNSG 1136 Mental Health (1-1-0)
Introduction to the principles and theories of positive mental health and human behaviors. Topics include emotional responses, coping mechanisms, and therapeutic communication skills.
Prerequisites: Concurrent enrollment in VNSG 1410 Nursing in Health & Illness III. Successful completion of Semester II courses with a grade of 75% (C) or better. Sixteen lecture hours per semester.

VNSG 1660 Clinical-Practical Nurse (Medical/Surgical, Psych) (6-0-24)
A health-related work-based learning experience that enables the student to apply specialized occupation theory, skills, and concepts. Direct supervision is provided by the clinical professional.
Prerequisites: Concurrent enrollment in VNSG 1410 Nursing in Health & Illness III and successful completion of Semester II courses with a grade of 75% (C) or better. Four hundred clinical hours per semester.

NURSING ASSISTANT/AIDE

Semester I

NURA 1401 Nurse Aide for Health Care Organizations I (4-3-4)
Course Description: Preparation for entry level nursing assistants to achieve a level of knowledge, skills, and abilities essential to provide basic care to residents of long-term care facilities. Topics include resident's rights, communication, safety, obser-

vation, reporting and assisting residents in maintaining basic comfort and safety. Emphasis on effective interaction with members of the health care team. Prerequisites: Admission into the program and concurrent enrollment in NURA 1460, NURA 1407. Pre or concurrent MDCA 1313. Forty-eight lecture and sixty-four lab hours per semester.

- NURA 1407** **Nurse Aide for Health Organizations II** **(4-4-0)**
 Course Description: A basic study of the structures and functions of the human body. Prerequisite: Admission into the Program and concurrent enrollment in NURA 1401, NURA 1460. Pre or concurrent MDCA 1313. Sixty-four lecture hours per semester.
- NURA 1460** **Clinical - Nursing Assistant** **(4-0-12)**
 Course Description: 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

OCCUPATIONAL THERAPY ASSISTANT PROGRAM (OTHA) (008030)

- OTHA 1305** **Principles of Occupational Therapy** **(3-3-0)**
(Formerly Introduction to Occupational Therapy)
 Introduction to occupational therapy including the historical development and philosophy. Emphasis on the roles of the occupational therapy assistant. Topics include occupation in daily life; education and functions; occupational therapy personnel; current health care environment; and moral, legal, and ethical issues.
- Learning Outcomes: The student will discuss the history of occupational therapy; define and identify occupational therapy frames of reference; compare and contrast the education, roles, and functions of occupational therapy personnel; delineate occupational performance by area and performance component; compare occupational therapy practice areas; and demonstrate patient/practitioner interaction.
 Prerequisite: Acceptance into the Occupational Therapy Assistant Program
- OTHA 1309** **Human Structure and Function in Occupational Therapy** **(3-2-4)**
 Study of the biomechanics of human motion. Emphasis on the musculoskeletal system including skeletal structure, muscles and nerves, and biomechanical assessment procedures.
- Learning Outcome: Identify human skeletal structure by bones, boney landmarks, and muscles; analyze human motion by muscle function, innervation, and kinetics; identify normal and abnormal movement; and evaluate joint range of motion and muscle strength.
 Co-requisite: OTHA 1305, OTHA 1315 and OTHA 2311.
- OTHA 1315** **Therapeutic Media I in Occupational Therapy** **(3-2-4)**
 Introduction to basic skills in various activities and tasks used as therapeutic intervention in occupational therapy. Emphasis on activity analysis; how to adapt and teach therapeutically and how to supply, equip and maintain a safe work environment.

Learning Outcomes: The student will demonstrate methods and techniques in a variety of media that will enhance patient/client care; analyze tasks and activities; apply the function of task analysis to therapeutic intervention; demonstrate basic safety and management of resources used for media in a clinical setting and utilize uniform terminology as it applies to occupational therapy.

Co-requisite: OTHA 1305, OTHA 2311 and OTHA 1309.

OTHA 1419 Therapeutic Modalities I in Occupational Therapy (4-3-4)

Instruction in concepts and techniques, and assessments leading to proficiency in skills and activities used as treatment modalities in occupational therapy. Emphasis on the occupational therapy process within the context of the occupational performance model.

Learning Outcomes: The student will exhibit competency in occupational therapy modalities and related assessments. Select appropriate modalities according to established treatment concepts; and demonstrate entry level proficiency in occupational Therapy modalities. Prerequisites: OTHA 1305, OTHA 1315, OTHA 1309, and OTHA 2311; Co-requisite: OTHA 2301 and OTHA 2309.

OTHA 1562 Clinical I -Occupational Therapy Assistant (5-0-16)

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skill, and concepts. Direct supervision is provided by the clinical professional.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts and skill involving specialized materials, tools, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental, social and legal systems associated with the occupation and the business/industry; and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry.

Prerequisite: OTHA 1305, OTHA 1315, OTHA 2311, OTHA 1309, OTHA 2301, OTHA 1419, OTHA 2309.

OTHA 2301 Pathophysiology in Occupational Therapy (3-2-4)

Study of the pathology and general health management of diseases and injuries across the lifespan encountered in occupational therapy treatment settings. Topics include etiology, symptoms and the physical and psychological reactions to diseases and injuries.

Learning Outcomes: The student will identify the fundamental characteristics of common diseases and conditions; distinguish the physical, psychosocial and cognitive characteristics of various diseases and conditions; discuss the environmental factors of common diseases and conditions and recognize the implications of therapeutic interventions for common diseases and conditions.

Prerequisite: OTHA 1305, OTHA 1315, OTHA 1309 and OTHA 2311.

Co-requisite: OTHA 1419 and OTHA 2309.

OTHA 2304 Neurology in Occupational (formerly Advanced Pathophysiology) (3-2-4)

Study of neuroanatomy and neurophysiology as it relates to neurological conditions commonly treated in occupation therapy. Emphasis on neuro-based occupational therapy intervention techniques.

Learning Outcome: The student will identify and examine the components of neuroanatomy and neurophysiology as they relate to occupational therapy treatment; describe the pathogenesis, prognoses and management of neurological disorders commonly treated in occupational therapy and identify and generalize specific neurological principles utilized in special techniques seen in occupational therapy treatment. Prerequisite: OTHA 1305, OTHA 1315, OTHA 2311, OTHA 1309, OTHA 2301, OTHA 1419, OTHA 2309, and OTHA 1562. Co-requisites: OTHA 2335 and OTHA 2405.

OTHA 2309 **Mental Health in Occupational Therapy** **(3-3-0)**
 Study of the promotion of mental health through occupational therapy. Emphasis on theory and intervention strategies to enhance psychosocial function.

Learning Outcomes: The student will apply selected frames of reference to promote psychosocial function; implement group processes and group dynamics; explore occupational therapy assessment strategies for psychosocial function; identify and explain psychiatric diagnoses based on the Diagnostic and Statistical Manual; demonstrate proficiency in planning and implementation to promote psychosocial function and exhibit effective documentation skills relating to psychosocial function. Prerequisite: OTHA 1305, OTHA 1309, OTHA 1315, and OTHA 2311. Co-requisite: OTHA 1419 and OTHA 2301.

OTHA 2311 **Abnormal Psychology in Occupational Therapy** **(3-3-0)**
 Fundamental principles and techniques of psychological diagnosis with emphasis on mental health issues including theories, etiology and treatment intervention.

Learning Outcomes: The student will identify diagnostic categories and psychological etiologies and compare psychological treatment strategies. Co-requisite: OTHA 1305, OTHA 1309 and OTHA 1315.

OTHA 2335 **Health Care Management in Occupational Therapy** **(3-3-0)**
 Explores the roles of the occupational therapy assistant in health care delivery. Emphasis on documentation, occupational therapy standards and ethics, health care team role delineation and management.

Learning Outcomes: The student will delineate the roles of the occupational therapy assistant and registered occupational therapist; outline the role of the occupational therapy assistant as activity director including assessment, planning and program management; demonstrate proficiency in documentation legal and reimbursement purposes; relate the requirements for certification and licensure; explain the component of quality assurance as it relates to health care systems; analyze issues related to ethical practice; summarize the roles of the health care team; identify basic management strategies and differentiate components of supervision. Prerequisite: OTHA 1305, OTHA 1315, OTHA 2311, OTHA 1309, OTHA 2301, OTHA 1419, OTHA 2309 and OTHA 1562. Co-requisite: OTHA 2304 and OTHA 2405.

OTHA 2405 **Therapeutic Modalities II in Occupational Therapy** **(4-3-4)**
 Continuation of Therapeutic Modalities I. Emphasis on current rehabilitative modalities.

Learning Outcomes: The student will demonstrate competency in selected rehabilitative modalities; select appropriate rehabilitative modalities according to estab-

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lished concepts; and demonstrate entry level proficiency in modalities in occupational therapy practice areas. Prerequisite: OTHA 1305, OTHA 1315, OTHA 1309, OTHA 2311, OTHA 2301, OTHA 2309, OTHA 1419, and OTHA 1562. Co-requisite: OTHA 2304 and OTHA 2335.

OTHA 2430 Workplace Skills for the Occupational Therapy Assistant (4-4-0)

Seminar-based course designed to complement Level II fieldwork by creating a discussion forum addressing events, skills, knowledge, and/or behaviors related to the practice environment. Application of didactic coursework to the clinic and test-taking strategies for certification exams.

Learning Outcomes: Practice resource management; demonstrate stress management; implement interventions based on research; communicate effectively with supervisors, peers, clients, and other professionals; process applications for professional credentialing, and practice techniques to increase employment marketability. Prerequisite: OTHA 1301, OTHA 1315, OTHA 2311, OTHA 1309, OTHA 2301, OTHA 1419, OTHA 2309, OTHA 1562, OTHA 2304, OTHA 2405 and OTHA 2335. Co-requisite: OTHA 2562, OTHA 2563.

OTHA 2562 Clinical Rotation II - Level II Occupational Therapy (5-0-15)

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skill, and concepts. Direct supervision is provided by the clinical professional.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts and skill involving specialized materials, tools, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental, social and legal systems associated with the particular occupation and the business/industry; and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the of the occupation and the business/industry. Prerequisite: OTHA 1305, OTHA 1315, OTHA 2311, OTHA 1309, OTHA 2301, OTHA 1419, OTHA 2309, OTHA 1562, OTHA 2304, OTHA 2405, OTHA 2335 Co-requisite: OTHA 2430.

OTHA 2563 Clinical Rotation III - Level II Occupational Therapy (5-0-15)

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skill, and concepts. Direct supervision is provided by the clinical professional.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts and skill involving specialized materials, tools, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental, social and legal systems associated with the particular occupation and the business/industry; and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. Prerequisite: OTHA 1305, OTHA 1315, OTHA 2311, OTHA 1309, OTHA 2301, OTHA 1419, OTHA 2309, OTHA 1562, OTHA 2304, OTHA 2405, OTHA 2335 Co-requisite: OTHA 2430.

OFFICE SYSTEMS TECHNOLOGY (POFT) (005824)

- POFT 1301 Business English (3-3-0)**
The student will apply the basic rules of grammar, spelling, capitalization, number usage, and punctuation; utilize terminology applicable to technical and business writing; develop proofreading and editing skills; and write effective sentences and paragraphs for business applications.
- POFT 1313 Professional Development for Office Personnel CAPSTONE (3-3-0)**
The student will demonstrate necessary skills for seeking and securing employment; apply problem-solving techniques to complete tasks; identify attitudes and values that contribute to effective work habits; demonstrate how to work effectively as part of a team; exhibit business etiquette; and identify professional attire.
- POFT 1319 Records and Information Management I (3-3-0)**
The student will identify the stages in the life cycle of a record; file and retrieve records using alphabetic, numeric, geographic, and subject filing systems; input, index, code, and cross-reference records; use tickler file, requisition, and charge-out procedures; and differentiate between manual and electronic filing. Fall only.
- POFT 1325 Business Math and Machine Applications (3-3-0)**
The student will utilize basic math skills; apply basic math skills to solve business application problems using an electronic calculator/keyboard. Emphasis on business problem-solving skills.
- POFT 1329 Keyboarding and Document Formatting (3-3-1)**
The student will demonstrate proper keyboarding techniques including touch technique; demonstrate an acceptable level of keyboarding skills with a minimum speed of 30 words per minute (wpm) with minimum proficiency; apply proofreading and editing skills; and create basic business documents.
- POFT 1349 Administrative Office Procedures II (3-3-0)**
The student will prepare business documents; collect, classify, write, and present business data in report form; define management theories; and describe and execute the job application process.
Suggested Prerequisite: POFT 2312 Business Correspondence & Communication or equivalent competencies. Spring only.
- POFT 1409 Administrative Office Procedures I CAPSTONE (4-4-1)**
The student will develop time management techniques; manage in-coming and outgoing mail; demonstrate appropriate telephone techniques; coordinate travel and meeting arrangements; and identify the basic skills of an office professional.
Suggested Prerequisite: POFT 2401 Document Formatting & Skillbuilding.
- POFT 2312 Business Correspondence and Communication (3-3-0)**
The student will compose and produce effective business communications appropriate to industry needs; apply critical evaluation techniques to business communications; and recognize the importance of coherent, ethical communication principles in business and industry. Suggested Prerequisite: POFT 2401 Document Formatting & Skillbuilding or English 1301 (grade of C or better.)

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- POFT 2331** **Administrative Systems** **(3-3-0)**
The student will select appropriate materials, procedures, and equipment for assigned tasks; and manage business projects using current technology, critical thinking, and problem-solving skills. Suggested Prerequisite: Computer application software proficiency and basic office procedures competency. Spring only.
- POFT 2401** **Document Formatting and Skillbuilding** **(4-4-1)**
The student will produce alphabetic, alphanumeric, and numeric material at a minimum speed of 40 words per minute (wpm) with minimum proficiency; apply mailability standards to document production; use proofreading and editing skills; and format and produce a variety of business documents using word processing software. Suggested Prerequisite: POFT 1329 or High School Keyboarding 30 wpm.
- POFT 2433** **Advanced Document Formatting & Skillbuilding** **(4-4-1)**
The student will apply mailability standards according to a specified procedure manual; produce alphabetic, alphanumeric, and numeric material at a minimum speed of 50 words per minute (wpm) with minimum proficiency; use proofreading and editing skills; and implement decision making skills. Spring only.
Suggested Prerequisite: POFT 2401 Document Formatting and Skillbuilding or equivalent.
- POFT 2466** **Practicum (or Field Experience)** **CAPSTONE**
General Office Occupations and Clerical Services **(4-1-27)**
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.
- POFI 2401** **Word Processing** **(4-4-0)**
In-depth coverage of word processing software focusing on business applications.
Prerequisite: POFT 2401.

PHARMACY (PHRA)

- PHRA 1209** **Pharmaceutical Mathematics I** **(2-1-2)**
Pharmaceutical mathematics including reading, interpreting, and solving calculation problems encountered in the preparation and distribution of drugs. Conversion measurements within the apothecary, avoirdupois, and metric systems with emphasis on the metric system of weight and volume. Topics include ratio and proportion, percentage, dilution and concentration, milliequivalents, units, intravenous flow rates, and solving dosage problems.
- Learning Outcomes: The student will solve problems using addition, subtraction, multiplication and division of whole numbers, mixed numbers, fractions, and decimals; convert from Roman numerals to Arabic numerals and from degrees Centigrade to degrees Fahrenheit and vice versa; solve pharmaceutical problems using ratio and proportion; and convert between the various denominations of each of the basic units of the metric system and use these conversion factors for the common systems which are most frequently used in the pharmacy; solve pharmaceutical problems that require conversion between different systems for measurement including metric, apothecary, and avoirdupois; solve pharmaceutical problems which involve percentage strength. The student will calculate the proper dose for an adult or pediatric patient when given the recommended dose of a drug; calculate the correct drip rate for IV mixtures to deliver the appropriate amount of the drug and/or fluid prescribed. Prerequisite MATH 0374 and Approval of an Advisor.

PHILOSOPHY AND LOGIC (PHIL)

PHIL 1301	Introduction to Philosophy	CORE	(3-3-0) CB 3801015112
	An explanation of the nature and character of philosophy will be given, including its relations to religion, science, and art. Introductory concepts based on critical thinking will be applied to perennial problems of existence, the meaning of life, revelation, reason and scientific methods as well as contemporary issues. The major philosophical systems are reviewed.		
PHIL 2303	Introduction to Logic		(3-3-0) CB 3801015212
	The nature and methods of correct reasoning, deductive and inductive proof, fallacies and arguments.		
PHIL 2306	Introduction to Ethics	CORE	(3-3-0) CB 3801015312
	Approaches the traditional problems of responsibility and justice through a study of contemporary moral issues; value theories and their justification will be used as guides to discussion. Ethical questions ranging from civil disobedience and sexual liberation to abortion, contraception and euthanasia are examined within the framework of classical and modern philosophies.		
PHIL 1316	History of Religions		(3-3-0) CB 3802015112
	Philosophical and social dimensions of Hinduism, Buddhism, Taoism, Judaism, Christianity, and Islam, emphasizing the diversity of religious experience and traditions.		

PHYSICAL EDUCATION-See Kinesiology

PHYSICAL THERAPIST ASSISTANT (PTHA) (008032)

PTHA 1321	Clinical Pathophysiology	(3-3-0)
	Study of the pathogenesis, prognosis, and therapeutic management of diseases/conditions commonly encountered in physical therapy.	
	Learning Outcomes: The student will identify and explain the pathogenesis of selected diseases/conditions relevant to physical therapy; determine aspects of pathophysiology that affect physical therapy treatment; analyze and describe the current response to acute physiological change in patients' conditions; and obtain and assess pertinent pharmacological information and its impact on patient care.	
	Prerequisite: PTHA 1360; Co-requisite: PTHA 1391, PTHA 2535 and PTHA 2431	
PTHA 1360	Clinical I-Physical Therapist Assistant	(3-0-15)
	Introductory Level A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the college faculty. Clinical experiences are unpaid external learning experiences.	

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; and demonstrate legal and ethical behavior, safety practices, and interpersonal and teamwork skills communicating in the applicable language of the occupation and the business or industry.

Prerequisite: Successful completion of all professional coursework to date with a grade of C or better.

PTHA 1391 Special Topics in Physical Therapist Assistant (3-3-0)

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 is designed to provide the student therapist assistant with the basic concepts of orthopedics relating to the musculoskeletal system and arrangement of various conditions and injuries of the joints and regions of the body. This course builds upon the principles of therapeutic exercise acquired in PTHA 2509, and broadens the knowledge base of the student prior to the student's final clinical experience.

Prerequisite: PTHA 2509; Co-requisite: PTHA 2535 and PTHA 2431

PTHA 1405 Basic Patient Care Skills (4-3-3)

Introduction to the theory and application of basic patient handling, functional skills, assessment techniques, and measurement techniques.

Learning Outcomes: The student will distinguish and examine the theory, principles, and techniques of patient handling and functional skills; perform basic patient handling, functional skills assessment techniques, and measurement techniques; and utilize relevant communication techniques.

Prerequisite: PTHA 1409 and PTHA 1413. Co-requisite: PTHA 2509 and PTHA 1531

PTHA 1409 Introduction to Physical Therapy (4-3-3)

Introduction to the profession of physical therapy including the exploration of the historical and current scope of physical therapy; the theory and application of basic patient handling/functional skills and assessment and measurement techniques.

Learning Outcomes: The student will demonstrate a knowledge of the history, purpose, and scope of physical therapy; recognize the roles and responsibilities of the physical therapy assistant in physical therapy and the health care delivery system; and perform basic handling and functional skills.

Co-requisite: PTHA 1413

PTHA 1413 Functional Anatomy (4-3-3)

Study of human anatomy and its application to the motion of the musculoskeletal system as it relates to normal activities and dysfunctions. Integration of skills related to the kinesiological assessment and measurement of the human body.

Learning Outcomes: The student will identify, conceptualize, and categorize the musculoskeletal and neurologic structures of the human body; and define, quantify, and contrast normal and abnormal movement.

Co-requisite: PTHA 1409

- PTHA 1531 Physical Agents (5-3-6)**
 Study of the biophysical principles, assessment, and application of therapeutic physical agents and therapeutic massage with specific emphasis on indications, contraindications, medical efficacy, and physiological effects.
- Learning Outcomes: The student will safely and effectively select and apply physical agents; utilize appropriate assessment techniques to monitor response to treatment; and discuss biophysical principles as they results to the application of physical agents. Prerequisites: PTHA 1409 and PTHA 1413. Co-requisites: PTHA 2509 and PTHA 1405
- PTHA 2339 Professional Issues (3-3-0)**
 A capstone course which engages the student in the discussion of professional issues and behaviors related to clinical practice and which prepares the student for transition into the workforce. Successful completion of a comprehensive examination including information from all previous courses to date will be required to pass this course.
- Learning Outcomes: The student will develop job placement skills; discriminate appropriate behaviors in response to legal, ethical, and professional interactions; and debate socioeconomic influences related to the field of physical therapy.
 Prerequisites: All PTHA professional course work to date.
- PTHA 2361 Clinical II-Physical Therapist Assistant (3-0-18)**
 Advanced level. A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the college faculty. Clinical experiences are unpaid external learning experiences. Prerequisite: Successful completion of all professional coursework to date with a grade of 'C' or better.
- Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; and demonstrate legal and ethical behavior, safety practices, and interpersonal and teamwork skills communicating in the applicable language of the occupation and the business or industry.
 Prerequisites: All PTHA professional course work to date.
- PTHA 2362 Clinical III-Physical Therapist Assistant (3-0-18)**
 Advanced level. A method of instruction providing detailed education, training and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the college faculty. Clinical experiences are unpaid external learning experiences. Prerequisite: Successful completion of all professional coursework to date with a grade of 'C' or better.
- Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the busi-

ness/industry; and demonstrate legal and ethical behavior, safety practices, and interpersonal and teamwork skills communicating in the applicable language of the occupation and the business or industry. Prerequisites: All PTHA professional course work to date.

PTHA 2431 Management of Neurological Disorders (4-3-3)
Intermediate course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected neurological disorders.

Learning Outcomes: The student will distinguish and critically examine the concepts and principles of comprehensive management of neurological disorders; develop, implement, and revise a comprehensive treatment approach for neurological disorders; and utilize relevant communication techniques. Prerequisites: PTHA 1360. Co-requisites: PTHA 2535, PTHA 1321, and PTHA 1391

PTHA 2509 Therapeutic Exercise (5-3-6)
Critical examination of concepts and application of techniques related to therapeutic exercise and functional training.

Learning Outcomes: The student will distinguish and examine the theory, principles, and techniques of therapeutic exercise; perform and instruct therapeutic exercise and functional training for various patient populations; justify the rationale for the selection and revision of therapeutic exercise; and utilize relevant communication techniques. Prerequisites: PTHA 1409 and PTHA 1413. Co-requisites: PTHA 1405 and PTHA 1531

PTHA 2535 Rehabilitation Techniques (5-3-6)
Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected long-term pathologies.

Learning Outcomes: The students will distinguish and critically examine the concepts and principles of comprehensive management of long-term pathologies; develop, implement, and revise a comprehensive treatment approach for various long-term pathologies; and utilize relevant communication techniques. Prerequisites: PTHA 1360. Co-requisites: PTHA 2431, PTHA 1321, and PTHA 1391

PHYSICS (PHYS)

PHYS 1401 College Physics I CORE (4-3-4)
CB 4008015303

This course is a study of the fundamental laws and theories of physics. Topics included are atomic structure, linear, circular, and simple harmonic motion, forces, Newton's Laws, energy, and thermal concepts. Prerequisite: MATH 1316 or approval of the instructor. (Fall, Summer I).

PHYS 1402 College Physics II CORE (4-3-4)
CB 4008015303

This course is a continuation of PHYS 1401 with emphasis on mechanical waves, electrostatics, DC & AC circuits, electromagnetic waves, optics, and nuclear and quantum physics. Prerequisite: a grade of "C" or better in PHYS 1401 or approval of the instructor. Spring, Summer II.

PHYS 1405	Elementary Physics I	CORE	(4-3-2) CB 4008015103
	<p>This is a survey course for students who want a basic descriptive introduction to physics. The topics covered are the metric system, linear and circular motion, forces, work, energy, properties of matter, temperature, heat and expansion. Prerequisites: 12th grade reading level and eligibility for ENGL 1301 and concurrent enrollment in MATH 1314. Fall.</p>		
PHYS 1407	Elementary Physics II	CORE	(4-3-2) CB 4008015103
	<p>This is a continuation of PHYS 1405. The topics covered are vibrating bodies, sound, light, electricity, magnetism, and atomic and nuclear physics. PHYS 1405 and 1407 are primarily intended for students whose curricula call for six or eight semester hours of science. Prerequisite: PHYS 1405 or approval of the instructor. Spring.</p>		
PHYS 1410	Elementary Physics	CORE	(4-3-3) CB 4008015103
	<p>A survey course for students who want a basic descriptive introduction to physics. Topics covered include: the metric system, linear and circular motion, forces, work, energy, properties of matter, temperature, heat, thermal expansion, oscillations, sound, light, waves, electricity and magnetism, atomic and nuclear physics. Non-science majors. Prerequisites: 12th grade reading level, eligibility for ENGL 1301, and concurrent enrollment in MATH 1314. Fall, Spring</p>		
PHYS 1411	Introductory Astronomy I	CORE	(4-3-3) CB 4002015103
	<p>Introductory Astronomy will cover a brief history of astronomy, positional astronomy and scientific formalisms, astronomical tools, the solar system and possible theories explaining the formation of the solar system. To Be Arranged.</p>		
PHYS 1415	Physical Science I	CORE	(4-3-3) CB 4001015103
	<p>This is a college level course designed for non-science majors which surveys topics in Chemistry and Physics. This course fulfills eight of the 12 hours of science requirements for some degree plans (check with your advisor and/or college of transfer). It is required for elementary education certification for students transferring to TAMU. It is not for students majoring or minoring in science. Prerequisites: 12th grade reading level, and eligibility for ENGL 1301 and MATH 1314. Fall, Spring.</p>		
PHYS 1417	Physical Science II	CORE	(4-3-3) CB 4001015103
	<p>This course is the same as GEOL 1401 and is a survey of the natural process at work in the atmosphere, lithosphere, hydrosphere, and biosphere of Earth's place in the universe. It is designed to give the student an introduction to astronomy, geology, oceanography and meteorology. It is required for elementary education certification for students transferring to TAMU. It may also fulfill four of the eight or 12 hours of science requirements for some degree plans (check with your advisor and/or college of transfer). It is not for students majoring or minoring in science. Prerequisites: 12th grade reading level and eligibility for ENGL 1301 and MATH 1314. Fall, Spring.</p>		

**PHYS 2389 Academic Cooperative in Physics (3-2-3)
CB 4001015303**

The course involves practical hands-on research experience in physics. This will be accomplished by a cooperative work experience in a university, industrial, medical, or government facility working with trained scientists to solve a research problem in physics. Prerequisite: PHYS 1401 and 1402 or PHYS 2425 and 2426.

**PHYS 2425 University Physics I CORE (4-3-4)
CB 4008015403**

This is a detailed, calculus-based study of the fundamental laws and theories of physics. Topics covered include atomic structure, linear, circular, and simple harmonic motion, forces, Newton's Laws, energy, and thermal concepts. Co-requisite: MATH 2413 or approval of the instructor. Fall.

**PHYS 2426 University Physics II CORE (4-3-4)
CB 4008015403**

This course is a continuation of PHYS 2425. This course emphasizes the study of mechanical waves, electrostatics, electromagnetism, DC and AC circuits, electromagnetic waves, optics, and modern physics. Prerequisites: PHYS 2425 or ENGR 2301 and MATH 2413. Co-requisite: MATH 2414 or approval of the instructor. Spring.

POLICE ACADEMY

**CJLE 1506 Basic Peace Officer I (5-3-8)
430107**

Introduction to fitness and wellness, history of policing, professionalism and ethics, United States Constitution and Bill of Rights, criminal justice system, Texas Penal Code, Texas Code of Criminal Procedure, civil process, and stress management. This course taken in conjunction with Basic Peace Officer II, III, and IV will satisfy the TCLEOSE-approved Basic Peace Officer Training Academy.

**CJLE 1512 Basic Peace Officer II (5-3-8)
430107**

Basic preparation for a new peace officer. Covers field note taking, report writing, "use of force" law and concepts, problem solving, multiculturalism, professional policing approaches, patrol procedures, victims of crime, family violence, MHMR, crowd management, HAZMAT, and the criminal investigation. This course taken in conjunction with Basic Peace Officer I, III, and IV will satisfy the TCLEOSE-approved Basic Peace Officer Academy.

**CJLE 1518 Basic Peace Officer III (5-3-8)
430107**

Basic preparation for a new peace officer. Covers laws pertaining to controlled substances, crowd management, personal property, and crime scene investigation. This course taken in conjunction with Basic Peace Officer I, II, and IV will satisfy the TCLEOSE-approved Basic Peace Officer Academy.

**CJLE 1524 Basic Peace Officer IV (5-3-8)
430107**

Basic preparation for a new peace officer. Covers laws directly related to police field work. Topics include Texas Transportation Code, intoxicated driver, Texas Penal Code, elements of crimes, Texas Family Code, Texas Alcoholic Beverage Code, and civil liability. Requires the demonstration and practice of the skills of a police officer including patrol, driving, traffic stop skills, use of force, mechanics of arrest, firearm safety, and emergency medical care. Also includes study of the techniques and procedures used by police officers on patrol. Includes controlled substance identification, handling abnormal persons, traffic collision investigation, note taking and report writing, vehicle operation, traffic direction, crowd control, and jail operations. This course taken in conjunction with Basic Peace Office I, II, and III will satisfy the TCLEOSE-approved Basic Peace Officer Training Academy.

PSYCHOLOGY (PSYC)

**PSYC 2301 General Psychology CORE (3-3-0)
CB 4201015125**

A survey of major topics in psychology. Introduces the study of behavior, mental processes, and the factors that determine and affect both.

**PSYC 2306 Human Sexuality CORE (3-3-0)
CB 4201015325**

A survey course that will provide students with a broad range of information about sexuality, including a complete and balanced representation of the biological, sociological and psychological viewpoints. It is designed to help students become rational decision makers in an important aspect of their lives. Fall.

**PSYC 2308 Child & Life Span Development CORE (3-3-0)
CB 4207015125**

The study of the relationship of the physical, emotional, social, and mental factors in the growth and development of children.

**PSYC 2314 Life Span Growth and Development CORE (3-3-0)
CB 4207015125**

A summary of biosocial, cognitive and psychosocial development that normally occurs during a person's life span.

**PSYC 2317 Statistical Methods in Psychology CORE (3-3-0)
CB 4201015225**

This course is designed to familiarize students with statistical methods used in psychological research, assessment and testing. It includes the study of measures of central tendency and variability, statistical inference, correlation and regression as these apply to psychology.

RADIOLOGIC TECHNOLOGY (RADR) (008033)

RADR 1213 Principles of Radiographic Imaging I (2-1-3)

This course will analyze radiographic image qualities and the effects of exposure variables upon these qualities.

Learning Outcomes: The student will define, recognize, and evaluate qualities of the radiographic image; and analyze the effects of exposure variables upon each image quality. Prerequisite: Acceptance into the Radiologic Technology Program;
Co-requisites: RADR 1411, RADR 1409, RADR 1360

RADR 1360 Clinical Practicum I (3-0-12)

A method of instruction providing detailed education, training, and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills, involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry.

Key Concepts: Student radiographers will produce standard radiographs of the upper and lower extremities, chest, and abdomen under direct supervision of a Registered RT. Prerequisite: Acceptance into the Radiologic Technology Program;
Co-requisites: RADR 1411, RADR 1409, RADR 1213

RADR 1361 Clinical Practicum II (3-0-12)

A method of instruction providing detailed education, training, and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills, involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry.

Key Concepts: Student radiographers will produce standard radiographs of the upper extremities and chest with emphasis on the joints of the region under direct and indirect supervision of a Registered RT.
Prerequisites: RADR 1409, RADR 1411, RADR 1213, RADR 1360; Co-requisites: RADR 2309 and RADR 2401

- RADR 1362** **Clinical Practicum III** **(3-0-12)**
A method of instruction providing detailed education, training, and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.
- Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills, involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry.
- Key Concepts: Student radiographers will produce standard radiographs of the lower extremities and pelvis with emphasis on the joints of the region under direct and indirect supervision of a Registered RT.
- Prerequisites: RADR 2401, RADR 2309, and RADR 1361
- RADR 1363** **Clinical Practicum IV** **(3-0-12)**
A method of instruction providing detailed education, training, and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.
- Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills, involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry.
- Key Concepts: Student radiographers will produce standard radiographs of the spinal column and pelvis under direct and indirect supervision of a Registered RT. Student Radiographers must prove competence in all techniques in Practicum I-IV prior to entering the Sophomore Year.
- Prerequisite: RADR 1362
- RADR 1409** **Introduction to Radiography and Patient Care** **(4-3-4)**
This course includes the historical development of radiography, basic radiation protection, an introduction to medical terminology, ethical and legal issues for health care professionals, and an orientation to the program and to the health care system. Patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology are also included.
- Learning Outcomes: The student will define basic medical terms and ethical and legal standards; demonstrate basic radiographic protection and general safety in

patient care practices; assess patient condition and interact appropriately with the patient; respond appropriately to emergency situations; and identify pertinent pharmaceuticals and their applications.

Prerequisite: Acceptance into the Radiologic Technology Program; Co-requisites: RADR 1411, RADR 1213, RADR 1360

RADR 1411 Basic Radiographic Procedures (4-3-4)

This course includes an introduction to radiographic positioning terminology, the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of basic anatomy and related pathology.

Learning Outcomes: The student will define radiographic positioning terms; manipulate equipment properly; position and align anatomical structure and equipment; and evaluate images for proper demonstration of anatomy and pathology.

Prerequisite: Acceptance into the Radiologic Technology Program; Co-requisites: RADR 1409, RADR 1213, RADR 1360

RADR 2205 Principles Radiographic Imaging II (2-1-3)

A continuation of the study of radiographic imaging technique formulation, image quality assurance, and the synthesis of all variables in image production.

Learning Outcomes: The student will formulate techniques to optimize image quality, minimize patient exposure, and preserve equipment; apply methods of image quality assurance; and adapt technical variables to changing conditions.

Prerequisite: RADR 1363; Co-requisites RADR 2431, RADR 2360

RADR 2217 Radiographic Pathology (2-1-2)

An overview of the disease process and common diseases and their appearance on medical images.

Learning Outcomes: The student will classify types of diseases; explain the pathogenesis of common diseases; and identify the appearance of common diseases on medical images.

Prerequisites: RADR 2205, RADR 2431, and RADR 2360; Co-requisites: RADR 2313, RADR 2235 and RADR 2560

RADR 2235 Radiographic Technology Seminar (2-2-0)

This is a capstone course focusing on the synthesis of professional knowledge, skills, and attitudes in preparation for professional employment and lifelong learning.

Learning Outcomes: The student will synthesize professional knowledge, skills, and attitudes; demonstrate entry level competencies for professional employment; and demonstrate skills for lifelong learning.

Prerequisites: RADR 2205, RADR 2431, and RADR 2360; Co-requisites: RADR 2313, RADR 2217 and RADR 2560

RADR 2309 Radiographic Imaging Equipment (3-2-3)

A study of the equipment and physics of x-ray production, basic x-ray circuits, and the relationship of equipment components to the imaging process.

Learning Outcomes: The student will describe the equipment and physics of x-ray production; describe basic x-ray circuits; and relate equipment components to the imaging process.

Prerequisites: RADR 1409, RADR 1411, RADR 1213, RADR 1360; Co-requisites: RADR 2401 and RADR 1361

- RADR 2313 Radiographic Biology & Protection (3-3-0)**
A study of the effects of radiation exposure on biological systems, typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure.
- Learning Outcomes: The student will describe the biophysical mechanisms of radiation damage and the somatic and genetic effects of radiation exposure on humans; state typical dose ranges for routine radiographic procedures; explain basic methods and instruments for radiation monitoring, detection, and measurement; and apply appropriate radiation protection practices.
- Prerequisites: RADR 2205, RADR 2431, and RADR 2360; Co-requisites: RADR 2217, RADR 2235 and RADR 2560.
- RADR 2360 Clinical Practicum V (3-0-12)**
A method of instruction providing detailed education, training, and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.
- Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills, involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry.
- Key Concepts: Student radiographers will produce standard radiographs of the skull and facial bones under direct and indirect supervision of a Registered RT.
- Prerequisite: RADR 1363; Co-requisites RADR 2431, RADR 2205
- RADR 2401 Intermediate Radiographic Procedures (4-3-4)**
A continuation of the study of the proper manipulation of radiographic equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of intermediate anatomy and related pathology.
- Learning Outcomes: The student will manipulate equipment properly; position and align anatomical structure and equipment; and evaluate images for proper demonstration of anatomy and pathology.
- Prerequisites: RADR 1409, RADR 1411, RADR 1213, RADR 1360; Co-requisites: RADR 2309 and RADR 1361
- RADR 2431 Advanced Radiographic Procedures (4-3-4)**
An advanced course including the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of advanced anatomy and related pathology.
- Learning Outcomes: The student will master the manipulation of equipment; position and alignment of anatomical structures and equipment; and evaluate images for proper demonstration of anatomy and pathology.
- Prerequisite: RADR 1363; Co-requisites RADR 2205, RADR 2360

RADR 2560 Clinical Practicum VI (5-0-20)

A method of instruction providing detailed education, training, and work-based experience and direct patient/client care, generally at a clinical site. Specific detailed learning objectives are developed for each course by the faculty. On-site clinical instruction, supervision, evaluation and placement is the responsibility of the college faculty. Clinical experiences are unpaid external learning experiences. Course may be repeated if topics and learning outcomes vary.

Learning Outcomes: As outlined in the learning plan, the student will apply the theory, concepts, and skills, involving specialized materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the particular occupation and the business/industry; demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable language of the occupation and the business or industry.

Key Concepts: Student radiographers will produce standard radiographs of the Gastrointestinal and Urinary systems under direct and indirect supervision of a Registered RT. Student radiographers will also gain experiences in the auxiliary areas of nuclear medicine, computerized tomography, sonography, and magnetic resonance imaging.

Prerequisites: RADR 2205, RADR 2431, and RADR 2360; Co-requisites: RADR 2313, RADR 2235 and RADR 2217

READING (READ)

Developmental Reading

These developmental reading courses are designed to help students strengthen their reading skills and thus prepare them to be successful in college level courses. Reading comprehension, rate, flexibility, selectivity, and vocabulary development are emphasized. Each course features instruction at specific reading levels. Homogeneous grouping and individual student placement are determined by the College's assessment and placement policy. These courses are sequential.

READ 0373 Beginning College Reading (3-3-0)
CB 3201085212

This course is designed to help students obtain basic reading skills in comprehension, rate, flexibility, selectivity, and vocabulary development. Prerequisites: 6.0-8.4 on the Nelson Denny local placement exam or ENSL 0371.

READ 0374 Intermediate College Reading (3-3-0)
CB 3201085212

This course is designed to help students build their basic reading skills in comprehension, rate, flexibility, selectivity, and vocabulary development. Prerequisites: READ 0373 or 8.5-10.4 on the Nelson Denny local placement exam.

READ 0375 Advanced College Reading (3-3-0)
CB 3201085212

This course is designed to help students attain the reading skills in comprehension, rate, flexibility, selectivity, and vocabulary development necessary to succeed in college-level transfer courses. Prerequisites: READ 0374 or 10.5-11.9 on the Nelson Denny local placement exam.

REAL ESTATE (RELE)**(005423)**

RELE 1201	Principles of Real Estate An overview of licensing as a real estate broker and salesperson, ethics of practice, titles to and conveyancing of real estate, legal descriptions, law of agency, deeds, encumbrances and liens, distinctions between personal and real property, contracts, appraisal, finance and regulations, closing procedures, and real estate mathematics. Also includes federal, state, and local laws relating to housing discrimination, housing credit discrimination, and community reinvestment.	(2-2-0)
RELE 1203	Real Estate Appraisal A study of the central purposes and functions of an appraisal; social and economic determinant of value, appraisal case studies, cost, market data and income approaches to value estimates, final correlations, and reporting.	(2-2-0)
RELE 1207	Real Estate Investment Financing, evaluation, and management of real estate investment. Emphasis on real estate investment characteristics, techniques of investment analysis, time-valued money, discounted investment criteria, leverage, and applications to property tax implications of owning real estate.	(2-2-0)
RELE 1209	Real Estate Law Provides a study of legal concepts of real estate, land description, real property rights, estates in land, contracts, conveyances, encumbrances, foreclosure, recording procedures, and evidence of title.	(2-2-0)
RELE 1211	Real Estate Contracts A review of real estate contracts required by Section 6A (3) of the Real Estate License Act with emphasis on general contract law requirements. Also covers the purpose, history, and working process of the Broker-Lawyer Committee. Includes preparation of real estate contract forms with emphasis on the most commonly used forms.	(2-2-0)
RELE 1215	Property Management 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.	(2-2-0)
RELE 1219	Real Estate Finance An overview of the U.S. monetary system, primary and secondary money markets, sources of mortgage loans, federal government programs, loan applications, processes and procedures, closing costs, alternative instruments, laws affecting mortgage lending, and the State Housing Agency.	(2-2-0)
RELE 1221	Real Estate Marketing A study of real estate professionalism and ethics, characteristics of successful salespersons, time management, psychology of marketing, listing procedures, advertising, negotiating and closing financing, and the deceptive trade practice act, consumer protection act, and commercial code.	(2-2-0)
RELE 1225	Real Estate Mathematics Mathematical logic and basic arithmetic skills including percentages, interest, time-valued money, depreciation, amortization, proration, and estimation of closing statement.	(2-2-0)

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RELE 1466	Practicum (or Field Experience) - Real Estate	CAPSTONE	(4-1-27)
	Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.		
RELE 2201	Law of Agency		(2-2-0)
	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 procedures, and the disclosure of an agency.		
RELE 2209	Principles of Real Estate II	CAPSTONE	(2-2-0)
	An overview of licensing as a real estate broker and salesman, ethics of practice, titles to and conveyancing of real estate, legal descriptions, law of agency, deed, encumbrances and liens, distinctions between personal and real property, contracts, appraisal, finance and regulations, closing procedures, real estate mathematics, and federal, state, and local laws relating to housing discrimination, housing credit discrimination and community reinvestment.		
RELE 2231	Real Estate Brokerage		(2-2-0)
	A study of law of agency, planning and organization, operational policies and procedures, recruiting, selection and training of personnel, records and control, and real estate firm analysis and expansion criteria.		

SOCIAL WORK (SOCW)

SOCW 2361	Introduction to Social Work	CORE	(3-3-0)
		CB 4407015124	
	A consideration of the organizational structure, functions, and administration of social work services and their relation to federal, state, and local government. The contribution pertaining to working with groups as exemplified in the history, philosophy, and ethics of social work.		

SOCIOLOGY (SOC)

SOCI 1301	Introductory Sociology	CORE	(3-3-0)
		CB 4511015125	
	Sociology as a field of knowledge. Basic terms, concepts, and theories applied to an explanation of human group behavior, personality, and society.		
SOCI 1306	Social Problems	CORE	(3-3-0)
		CB 4511015225	
	Identification and analysis of contemporary social problems with the aid of sociological principles.		
SOCI 2301	Marriage and the Family	CORE	(3-3-0)
		CB 4511015425	
	A sociological analysis of factors in self-understanding and interpersonal relations. Understanding of the process of mate selection, changing roles of men and women, and the problems of marital adjustment. Socialization of children and the problems of parenthood are considered.		

SPANISH (SPAN)

- SPAN 1300, 1310 Beginning Spanish Conversation I, II** (3-3-0)
CB 1609055413
These courses teach students to speak Spanish by the conversational method. Idiomatic expressions, drill in pronunciation and common usages will be emphasized. These courses are not recommended for students who expect to major or minor in Spanish nor for students who are native speakers of Spanish.
- SPAN 1311, 1312 Beginning Spanish I, II** (3-3-0)
CB 1609055113
A course for students from a Spanish-speaking environment. A systematic presentation of Spanish grammatical structure, vocabulary development, reading, and writing. Course is conducted in Spanish. SPAN 1311 taught Fall Semester only. SPAN 1312 taught Spring Semester only.
- SPAN 1411, 1412 Beginning Spanish I, II** (4-3-2)
CB 1609055113
Drill in pronunciation; vocabulary development; study of the principles of grammar; easy reading. Conversation at the student's level. Lab required. SPAN 1411 taught Fall Semester only. SPAN 1412 taught Spring Semester only. This course is recommended for non-native speakers.
- SPAN 2311, 2312 Intermediate Spanish I, II** (3-3-0)
CB 1609055213
Courses focus on advanced vocabulary development, grammar and mechanics, orthography and spelling with accent marks. Provide the student with research strategies for improving the composition writing process. Cover readings on Spanish speaking countries, histories and/or cultures. Introduce a literary analysis of short stories. Conducted in Spanish. Prerequisite: Two years of high school Spanish, SPAN 1412, or SPAN 1312. SPAN 2311 must be taken before SPAN 2312.
- SPAN 2321 Introduction to Spanish Literature I** CORE (0-3-0)
CB 1609055313
A chronological survey of Spanish literature from the Poema de Mio Cid to the works of Lope de Vega. Conducted in Spanish. Prerequisite: SPAN 2312 or four years of Spanish in high school.
- SPAN 2322 Introduction to Spanish Literature II** CORE (3-3-0)
CB 1609055313
A chronological survey beginning with the Enlightenment and including the romantics, 19th century poetry and drama, the emergence of the Generation of 1898 and literary forms of the twentieth century. Conducted in Spanish. Prerequisite: SPAN 2312 or four years of Spanish in high school.
- SPAN 2323 Introduction to Latin American Literature** CORE (3-3-0)
CB 1609055313
Conducted in Spanish. A chronological survey beginning with Columbus' letters, chronicles of the Spanish conquistadors, Cortes' letters, poetry and prose through Modernism. Prerequisite: SPAN 2312 or four years of Spanish in high school.

SPAN 2324 Spanish Culture **CORE** **(3-3-0)**
CB 1609055313
 Reading on Spanish prose selections, short stories, drama, and poetry. Introductory survey of the history and geography of Spain. Emphasis on written and oral compositions. Conducted in Spanish. Prerequisite: SPAN 2312 or four years of Spanish in high school.

SPEECH (SPCH)

SPCH 1144, 1145, 2144, 2145 Forensic Activities **(1-0-1)**
CB 2310016012
 Laboratory experience for students who participate in forensic activities. Prerequisite: Instructor approval required.

SPCH 1311 Introduction to Speech Communication **CORE** **(3-3-0)**
CB 2310015112
 Theories and practice of communication in interpersonal, small group, and public speech. Prerequisite: 12.0 reading level and eligibility for ENGL 1301.

SPCH 1315 Public Speaking **CORE** **(3-3-0)**
CB 2310015312
 Research, composition, organization, delivery, and analysis of speeches for various purposes and occasions. Prerequisite: 12.0 reading level and eligibility for English 1301.

SPCH 1318 Interpersonal Communication **(3-3-0)**
CB2310015412
 Theories and exercises in verbal and nonverbal communication with focus on interpersonal relationships. Prerequisite: 12.0 reading level and eligibility for English 1301.

SPCH 2333 Discussion and Small Group Communications **(3-3-0)**
CB 2310015612
 Discussion and small group theories and techniques as they relate to group process and interaction. Prerequisite: 12.0 reading level and eligibility for English 1301.

SPCH 2341 Fundamentals of Oral Interpretation **(3-3-0)**
CB 2310015712
 Theories and techniques in analyzing and interpreting literature. Preparation and presentation of various literary forms. Prerequisite: SPCH 1311.

WELDING (WLDG) (006245)

WLDG 1313 Introduction to Blueprint Reading for Welders **(3-2-2)**
 A study of industrial blueprints. Emphasis is placed on terminology symbols, graphic description, and welding processes, including systems of measurement and industry standards. Interpretations of plans and drawings used by industry.

WLDG 1417 Introduction to Layout and Fabrication **(4-3-4)**
 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 Welding and Cutting (4-2-6)**
An introduction to oxy-fuel welding and cutting, including history and future in welding, safety, setup and maintenance of oxy-fuel welding and cutting equipment and supplies.
- WLDG 1435 Introduction to Pipe Welding (4-2-7)**
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.
- WLDG 1528 Introduction to Shielded Metal Arc Welding (SMAW) (5-3-8)**
An introduction to shielded metal arc welding process. Emphasis placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction provided by SMAW fillet welds in various positions.
- WLDG 1553 Intermediate Layout and Fabrication (5-4-4)**
A continuation of the introductory Layout and Fabrication course which covers design and production of shop layout and fabrication. Emphasis placed on symbols, blueprints, and written specifications.
- WLDG 1557 Intermediate Shielded Metal Arc Welding (SMAW) (5-3-8)**
A study of the production of various fillets and groove welds. Preparation of specimens for testing in all test positions.
- WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW) (4-2-7)**
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.
- WLDG 2513 Welding using Multiple Process (5-3-8)**
Introduction 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 approved welding process.

