ABDR 1431 Basic Refinishing
4 Hours (2-4)
An introduction to current refinishing products, shop safety, and equipment used in the automotive refinishing industry. Emphasis on surface preparation, masking techniques, and refinishing of trim and replacement parts.

ABDR 1458 Intermediate Refinishing
4 Hours (2-4)
Expanded training in mixing and spraying of automotive topcoats. Emphasis on formula ingredient, reducing, thinning, and special spraying techniques. Introduction to partial panel refinishing techniques and current industry paint removal techniques. Prerequisite: ABDR 1431

ABDR 2449 Advanced Refinishing
4 Hours (2-4)
Skill development in multi-stage refinishing techniques. Further development in identification of problems and solutions in color matching and partial panel refinishing. Prerequisite: ABDR 1458

ACCT 2401 Principles of Accounting I
4 Hours (3-3)
This course is designed to present a general knowledge of accounting principles and procedures for the sole proprietorship and partnership form of business organization. Topics and problems include the complete accounting cycle, accounting systems and special purpose journals, internal controls and merchandising transactions, and the preparation of financial statements in accordance with generally accepted accounting principles. The student will study short-term liquid assets, including uncollectible accounts and notes receivable; several methods of inventory valuation and their effect upon operations; current liabilities and payroll accounting, including employer payroll taxes; the acquisition, depreciation (several methods), and disposal of plant property and equipment; intangible assets; and natural resources. Also studied are the accrual and cash bases of accounting and the effects of inflation and price-level changes.

ACCT 2402 Principles of Accounting II
4 Hours (3-3)
A continuation of ACCT 2401, this course includes the study of corporate financial accounting data for cost control and management decision making. The student is required to learn accounting methodology used by corporations to account for stocks, bonds, treasury stock, and investments. The student will learn how to prepare all the corporate financial statements. The student will use financial statement analysis to determine a firm’s liquidity, profitability, and solvency, and to track trends. The student will learn the basics of manufacturing cost accounting and product costing, as well as basic planning and control tools such as break-even and marginal analysis. The course of study will include the planning and budgeting function, including cash budgeting and the use of standard costs for cost control. The student will learn the variable costing method, incremental cost analysis, and the use of present value and other techniques to analyze alternatives such as capital expenditures, make-or-buy, sales mix and other managerial accounting decision making techniques. Prerequisite: ACCT 2401 or instructor permission.

ACNT 1329 Accounting Payroll and Business Tax Accounting
3 Hours (3-0)
A study of payroll procedures, taxing entities, and reporting requirements of local, state, and federal taxing authorities. The student will calculate employee payroll, employer related taxes and prepare related tax forms; and maintain payroll records required under current laws.

ACNT 1331 Federal Income Tax: Individual
3 Hours (3-0)
A study of the federal tax law for preparation of individual income tax returns. Students will prepare federal income tax forms and related schedules for individuals.

ACNT 1392 Special Topics in Accounting Technician
3 Hours (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. Special topics include: Governmental & Not-for-Profit Accounting, Auditing, and Intermediate Accounting. Prerequisite: ACCT 2402 or instructor permission.

ACNT 1403 Introduction to Accounting I
4 Hours (3-3)
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. Students will define accounting terminology; analyze and record business transactions in a manual and computerized environment; complete the accounting cycle; prepare financial statements; and apply accounting concepts related to cash and payroll. Co-requisite: ITSW 1404 or instructor permission.

ACNT 1411 Introduction to Computerized Accounting
4 Hours (3-3)
Introduction to utilizing the computer in maintaining accounting records with primary emphasis on a general ledger package. Students will utilize an application software to perform accounting tasks; maintain records and prepare and analyze reports for a business entity; complete a comprehensive project; and explain the components of general ledger software. Prerequisite ACNT 1403 or ACCT 2401 or instructor permission.

ACNT 1413 Computerized Accounting Applications
4 Hours (3-3)
Use of the computer to develop and maintain accounting records and to process common business applications for managerial decision-making. Students will utilize general ledger, spreadsheet and/or database software for accounting and management applications; and complete a comprehensive project. Prerequisite: ACCT 2401 or ACNT 1403 or instructor permission.
ARTS 2317 Painting II
3 Hours (2-4)
Continuation of Arts 2316 with emphasis on individual student’s expression. Prerequisite: ARTS 2316.

ARTS 2323 Drawing III
3 Hours (2-4)
A life drawing course in which the student learns the structure and action of the human figure.

ARTS 2324 Drawing IV
3 Hours (2-4)
A continuation of Art 2323 with emphasis on the student’s individual expression. Prerequisite: ARTS 2323.

ARTS 2326 Sculpture I
3 Hours (2-4)
An exploration of various sculptural approaches in which the student works in a variety of media including additive and subtractive techniques.

ARTS 2327 Sculpture II
3 Hours (2-4)
A continuation of Arts 2326 with emphasis on student’s individual expression. Prerequisite: ARTS 2326.

ARTS 2333 Printmaking I
3 Hours (2-4)
An introduction for the student into the basic printmaking processes including etching, monotype, and relief.

ARTS 2344 Printmaking II
3 Hours (2-4)
Opportunities for specialization and experimentation by the student in printmaking processes. Prerequisite: ARTS 2333.

ARTS 2341 Art Metals I
3 Hours (2-4)
Basic techniques for the student working with nonferrous metals.

ARTS 2342 Art Metals II
3 Hours (2-4)
Further investigation by the student of advanced techniques and processes. Prerequisite: ARTS 2341.

ARTS 2346 Ceramics I
3 Hours (2-4)
An introduction for the student to basic ceramic processes.

ARTS 2347 Ceramics II
3 Hours (2-4)
Opportunities for specialization by the student in ceramic processes. Prerequisite: ARTS 2346.

ARTS 2348 Digital Arts I
3 Hours (2-4)
An introduction to graphic design principles and typography with emphasis upon digital imaging. The course includes use of digital camera, flatbed and film scanners, Adobe Photoshop software, and printer.

ARTS 2349 Digital Arts II
3 Hours (2-4)
Advanced graphic design principles and techniques with emphasis upon digital imaging. The course enables students to explore more expressive and interpretive use of imagery and to practice commercial application as well. Course increases students’ exposure to software programs beyond Adobe Photoshop. Prerequisite: ARTS 2348.

ARTS 2356 (also COMM 1318) Photography I
3 Hours (2-4)
An introductory course for beginners in black and white photography. Students learn basic techniques of camera functions, film development, print processing and design fundamentals.

ARTS 2357 (also COMM 1319) Photography II
3 Hours (2-4)
A continuation of ARTS 2356 with emphasis on photography applied to publications. Students work with more complex subjects and techniques in order to communicate their ideas through photographic images. Prerequisite: COMM 1318 or ARTS 2356.

ARTS 2366 Watercolor I
3 Hours (2-4)
Exploration of the potentials of water based media by the student with emphasis on color and composition.

ARTS 2367 Watercolor II
3 Hours (2-4)
This course is an extension of Art 2366 and subject to all the conditions of that course. Prerequisite: ARTS 2366.

ARTV 1302 Introduction to Technical Animation and Rendering
3 Hours (2-4)
This course introduces the basic terminology and concepts associated with the development of computer modules used in technical computer animation. Topics include basic animation principles, model creation, light sources, camera positioning, rendering as well as importing and modification of external files. Course projects reflect current practices in the architectural, engineering, or construction disciplines. Prerequisite: DFTG 2340 Software: 3D Studio, Max Design.

ARTV 1340 Intermediate Technical Animation and Rendering
3 Hours (2-4)
3-D modeling and rendering techniques including lighting, staging, camera, and special effects. Emphasizes 3-D modeling building blocks using primitives to create simple and complex architectural/mechanical models. Execute conceptual ideas through 3-D modeling and rendering; demonstrate digital lighting and camera operations on constructed objects; and complete 3-D computer animation sequences. Prerequisite: ARTV 1302 Software: 3D Studio, Max Design.

AUMT 1305 Introduction and Theory of Automotive Technology
3 Hours (2-4)
An introduction to the automotive industry including automotive history, safety practices, shop equipment and tools, vehicle subsystems, service publications, fasteners, professional responsibilities, automobile maintenance, and light repair.

AUMT 1306 Automotive Engine Removal and Installation
3 Hours (2-4)
Fundamentals of engine inspection, removal and installation procedures. May be taught manufacturer specific. Prerequisite: AUMT 1305 or instructor approval. Capstone Course.
AUMT 1307 Automotive Electrical Systems  
3 Hours (2-4)  
An overview of automotive electrical systems including topics in operational theory, testing, diagnosis, charging and starting systems, and electrical accessories. Emphasis on electrical schematic diagrams and service manuals. May be taught manufacturer specific. Co-require: AUMT 1305 or instructor approval.

AUMT 1310 Automotive Brake Systems  
3 Hours (2-4)  
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. May be taught manufacturer specific. Co-require: AUMT 1305 or instructor approval.

AUMT 1316 Suspension and Steering  
3 Hours (2-4)  
Theory and operation of automotive suspension and steering systems including tire and wheel problem diagnosis, component repair, and alignment procedures. May be taught manufacturer specific. Prerequisite: AUMT 1305 or instructor approval.

AUMT 1319 Automotive Engine Repair  
3 Hours (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. May be taught manufacturer specific. Co-require: AUMT 1305 or instructor approval.

AUMT 1345 Automotive Heating and Air Conditioning  
3 Hours (2-4)  
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. May be taught manufacturer specific. Prerequisite: AUMT 1305 or instructor approval.

AUMT 1380 Cooperative Education - Auto/Automotive Mechanic/Technician  
3 Hours (1-0-20)  
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. Enrollment must be approved by the instructor.

AUMT 2301 Automotive Management  
3 Hours (3-1)  
Instruction in human relations, customer relations, and customer satisfaction. Emphasis on management techniques and building relationships between the service department and the customer.

AUMT 2313 Manual Drive Train and Axle  
3 Hours (2-4)  
A study of automotive clutches, clutch operation devices, standard transmissions, transaxles and rear axles, and differentials with emphasis on the diagnosis and repair of transmissions and drive lines. May be taught manufacturer specific. Prerequisite: AUMT 1305 or instructor approval.

AUMT 2317 Engine Performance Analysis I  
3 Hours (2-4)  
Theory, operation, diagnosis, and repair of basic engine dynamics, ignition systems, and fuel delivery systems. Use of basic engine performance diagnostic equipment. May be taught manufacturer specific. Prerequisite: AUMT 1307 or instructor approval.

AUMT 2321 Automotive Electrical Lighting and Accessories  
3 Hours (2-4)  
Repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. May be taught manufacturer specific. Prerequisite: AUMT 1307 or instructor approval.

AUMT 2325 Automatic Transmission and Transaxle  
3 Hours (2-4)  
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. May be taught manufacturer specific. Prerequisite: AUMT 1307 or instructor approval.

AUMT 2334 Engine Performance Analysis II  
3 Hours (2-4)  
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. May be taught manufacturer specific. Prerequisite: AUMT 2317 or instructor approval.

AUMT 2428 Automotive Service  
4 Hours (2-4)  
Mastery of automotive vehicle service and component systems repair. Emphasis on mastering current automotive competencies covered in related theory courses. Maybe taught manufacturer specific.

AUMT 2437 Automotive Electronics  
4 Hours (3-4)  
Topics address electrical principles, semiconductor and integrated circuits, digital fundamentals, microcomputer systems, and electrical test equipment as applied to automotive technology. May be taught manufacturer specific. Prerequisite: AUMT 1307 or instructor approval.

AUMT 2455 Automotive Engine Machining  
4 Hours (2-4)  
An in-depth study of precision engine rebuilding, cylinder reconditioning, and crack repair. Instruction in machines and equipment necessary to complete an engine repair. Maybe taught manufacturer specific.

AVIM 1301 Introduction to Aviation Management  
3 Hours (3-0)  
An introduction to small aviation business management. Emphasis on financial marketing, human resources, and administrative and information systems essential for successful business operations.

BCIS 1405 Business Computer Applications  
4 Hours (3-3)  
Computer terminology, hardware, software, operating systems, and information systems relating to the business environment. The main focus of this course is on business applications of software, including word processing, spreadsheets, databases, presentation graphics, and business-oriented utilization of the Internet. This course is designed for business majors who plan to transfer to a four year school.
**BCIS 2390 Systems Analysis & Design**  
3 Hours (3-0)  
Analysis of business information needs and preparation of specifications and requirements for appropriate data system solutions. Includes instruction in information requirements analysis, specification development and writing, prototype evaluation, and network application interfaces.

**BIOL 1322 Nutrition & Diet Therapy**  
3 Hours (3-0)  
Study of the chemical, physical, and sensory properties of food; nutritional quality; and food use and diet applications. May not be used as a core science requirement.

**BIOL 1406 Biology for Science Majors I**  
4 Hours (3-3)  
This general biology course (first semester) is devoted to principles shared by all organisms. These principles are cell biology, energy, genetics, evolution, and ecology.

**BIOL 1407 Biology for Science Majors II**  
4 Hours (3-3)  
This general biology course (second semester) is devoted to particular organisms. Much of the emphasis is on vertebrate biology. The principles studied are diversity, plant biology, animal biology, and behavior. Dissection required. Prerequisite: BIOL 1406.

**BIOL 1408 Introduction to Biology I**  
4 Hours (3-3)  
Fundamental principles of living organisms including physical and chemical properties of life, organization, and function. Concepts of reproduction, genetics, and the scientific method are included. This course is suitable as a required lab science for non-biology majors and may not be substituted for BIOL 1406.

**BIOL 1409 Introduction to Biology II**  
4 Hours (3-3)  
Fundamental principles of living organisms including evolutionary adaptation and classification. Concepts of evolution, ecology, and the scientific method are included. This course is suitable as a required lab science for non-biology majors and may not be substituted for BIOL 1407. Prerequisite: BIOL 1408

**BIOL 1424 Systematic Botany**  
4 Hours (3-3)  
Introduction to the identification, classification, and evolutionary relationships of vascular plants with emphasis on flowering plants. Includes the importance of herbaria, collection techniques, and the construction and use of taxonomic keys.

**BIOL 2289 Academic Cooperative**  
2 Hours (2-3)  
An instructional program designed to integrate on-campus study with practical hands-on work experience in the biological sciences/life sciences. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of living organisms and their systems. Prerequisite: BIOL 1406 and 1407 or BIOL 2401 and 2402.

**BIOL 2106 Environmental Biology Lab**  
1 Hour (0-3)  
This course is designed to enable students to become proficient in human interaction with and effect upon plant and animal communities. Conservation, pollution, energy, and other contemporary ecological problems. Co-requisite: BIOL 2306.

**BIOL 2306 Environmental Biology**  
3 Hours (3-0)  
This course is designed to enable students to become proficient in human interaction with and effect upon plant and animal communities. Conservation, pollution, energy, and other contemporary ecological problems. Co-requisite: BIOL 2106.

**BIOL 2401 Anatomy and Physiology I**  
4 Hours (3-4)  
This course is designed to produce student proficiency in body organization, the skeletal system, the muscular system, and the nervous system. Laboratory work will include dissection of a mammal. Dissection required. Prerequisite: BIOL 1406 highly recommended.

**BIOL 2402 Anatomy and Physiology II**  
4 Hours (3-4)  
This course is designed to enable students to become proficient in the following biological systems: the circulatory system with special emphasis on the blood and heart, the respiratory system, the digestive system, and the reproductive system. Laboratory work will include dissection of a mammal. Dissection required. Prerequisite: Requires “C” or greater in BIOL 2401.

**BIOL 2416 Genetics**  
4 Hours (3-4)  
This course is designed to enable students to become familiar with the following topics in genetics: the physical basis and the chemical basis of heredity, the laws of heredity and variation, mitotic and meiotic cell division, and the study of human diseases that are caused by genetic defects. Prerequisite: BIOL 1406 and 1407 or BIOL 2401 and 1402.

**BIOL 2421 Microbiology for Science Majors**  
4 Hours (3-4)  
The study of the morphology, physiology, and taxonomy of representative groups of pathogenic and nonpathogenic microorganisms. Pure cultures of microorganisms grown on selected media are used in learning laboratory techniques. Includes a brief preview of food microbes, public health, and immunology. Prerequisite: BIOL 1406 or BIOL 2401 or CHEM 1405 or CHEM 1411 or permission of instructor.

**BMGT 1301 Supervision**  
3 Hours (3-0)  
The role of the supervisor. Includes managerial functions as applied to leadership, counseling, motivation, and human relations skills. Students will explain the role, characteristics, and skills of a supervisor; identify the principles of management at the supervisory level; identify and discuss the human relations skills necessary for supervision; explain motivational techniques; and cite examples of how motivational techniques can be used by a supervisor in a working environment.

**BMGT 1305 Communications in Management**  
3 Hours (3-0)  
Basic theory and processes of communication skills necessary for the management of an organization’s workforce. Students will explain the communication process; identify and remedy major communication barriers; describe how communication contributes to effective management.
BMGT 1327 Principles of Management
3 Hours (3-0)
A study of the strategic management process, including analysis of how organizations develop and implement a strategy for achieving organizational objectives in a changing environment. Students will explain the processes involved in management strategy development; and develop an organizational strategic management plan.

BMGT 2341 Strategic Management
3 Hours (3-0)
Concepts, terminology, principles, theories, and issues in the field of management. Students will explain various theories, processes, and functions of management; apply theories to a business environment; identify leadership roles in organizations; and describe elements of the communication process.

BUSA 1313 Investments
3 Hours (3-0)
An overview of the theory and mechanics of business investment decisions and management of business financial assets using quantitative management techniques. Topics include time value of money, cash flow, capital budgeting, sources of funds, break-even analysis, and investment decisions. Students will define terms related to investments; apply basic concepts and calculations to planning and control of investments; and identify analytical models used for financial decision-making.

BUSA 1191 Special Topics in Business
1 Hour (1-0)
The student will gain exposure to a variety of topics that pertain to current issues and problems in the business administration field. This course may be repeated for additional credit using a different topic.

BUSA 1291 Special Topics in Business
2 Hours (2-0)
The student will gain exposure to a variety of topics that pertain to current issues and problems in the business administration field. This course may be repeated for additional credit using a different topic.

BUSA 1303 Principles of Finance
3 Hours (3-0)
Financial dynamics of a business. Includes monetary and credit theory, cash inventory, capital management, and consumer and government finance. Emphasizes the time value of money. Students will identify the processes and structures of monetary policy; relate the sources of capital to business, consumers, and government; define the time value of money and its relationship to credit; and describe the characteristics of financial intermediaries and related markets.

BUSA 1304 Introduction to Financial Advising
3 Hours (3-0)
A study of the financial problems encountered by financial advisors when managing family financial affairs. Includes methods to advise clients on topics such as estate planning, retirement, home ownership, savings, and investment planning. The student will identify the concepts associated with the time value of money; identify the differences among various savings and investment programs and classes of securities; identify the options for personal insurance; describe retirement and estate planning techniques; explain owning versus renting real property; and describe consumer protection legislation.

BUSA 1315 Small Business Operations
Hours (3-0)
How to operate a small business. Emphasizes management functions including planning, leading, organizing staffing, and controlling operations. Students will identify the aspects of operation a small business; describe human resource functions including employee development; explain the elements of total quality management; and compare purchasing procedures, inventory control, and computerized operations between/among small businesses.

BUSA 1391 Special Topics in Business
3 Hours (3-0)
The student will gain exposure to a variety of topics that pertain to current issues and problems in the business administration field. Prerequisite: 12 hours of business-related courses or permission of instructor. This course may be repeated for additional credit using a different topic.

BUSA 2380, 2381 Cooperative Education - Business, General
3 Hours (1-0-20)
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 work experience. This course may be repeated if topics and learning outcomes vary.

BUSA 1301 Business Principles
3 Hours (3-0)
Students will learn business operations, will develop a business vocabulary, and will direct their thinking to the field of business best suited to their interests and talents. Students will analyze the specialized fields within the business organization, such as management, accounting, personnel, marketing, and finance. Students will also explore the role of business in modern society.

BUSA 2301 Business Law
3 Hours (3-0)
The student will develop an understanding of the legal framework of business and will develop an awareness of legal responsibilities and rights when dealing with persons and institutions in the business world. The student will understand the basic principles of law of torts, contracts, bailments and personal property. Special emphasis will be placed on sales contracts.

CDEC 1313 Curriculum Resources for Early Childhood Programs
3 Hours (2-2-0)
This course is a study of the fundamentals of curriculum design and implementation in developmentally appropriate programs for children.

CDEC 1319 Child Guidance
3 Hours (2-2-0)
This course is an exploration of guidance strategies for promoting prosocial behaviors with individual and groups of children. An emphasis on positive guidance principles and techniques, family involvement and cultural influences is also covered. Practical application is gained through direct participation with children.
CDEC 1321 The Infant and Toddler
3 Hours (2-2-0)
This course is a study of appropriate infant and toddler programs, (birth to 3 years) including an overview of development, quality routines, appropriate environments, materials and activities and teaching/guidance techniques. Prerequisite: TECA 1354.

CDEC 1332 Observation and Assessment
3 Hours (2-2-0)
This course is a study of observation skills, assessment techniques, and documentation of children’s development.

CDEC 1356 Emergent Literacy for Early Childhood
3 Hours (2-2-0)
This course is an exploration of principles, methods, and materials for teaching young children language and literacy through a play-based, integrated curriculum.

CDEC 1358 Creative Arts for Early Childhood
3 Hours (2-2-0)
This course is an exploration of principles, methods, and materials for teaching children music, movement, visual arts, and dramatic play through process-oriented experiences to support divergent thinking.

CDEC 1359 Children with Special Needs
3 Hours (2-2-0)
This course is 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 2307 Math and Science for Early Childhood
3 Hours (2-2-0)
This course is an exploration of principles, methods, and materials for teaching children math and science concepts and process skills through discovery and play.

CDEC 2315 Diverse Cultural/Multilingual Education
3 Hours (2-2-0)
This course is an overview of multicultural education to include relationship with the family and community to develop awareness and sensitivity to diversity related to individual needs of children.

CDEC 2326 Administration of Programs for Children I
3 Hours (2-4-0)
This course is a practical application of management procedures for early care and 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 will be covered.

CDEC 2328 Administration of Programs for Children II
3 Hours (2-4-0)
This course is an in-depth study of the skills and techniques in managing early care and education programs, including legal and ethical issues, personnel management, team building, leadership, conflict resolution, stress management advocacy, professionalism, fiscal analysis and planning parent education/partnerships, and technical applications in programs. Prerequisite: CDEC 2326.

CDEC 2336 Administration of Programs for Children III
3 Hours (2-4-0)
This course is an advanced study of the skills and techniques in managing early child care education programs.

CDEC 2340 Instructional Techniques for Children with Special Needs
3 Hours (2-2-0)
This course is in an exploration of the development and implementation of curriculum for children with special needs.

CDEC 2341 The School Age Child
3 Hours (2-2-0)
This course is a study of appropriate programs for the school age child (5 to 13 years) including an overview of development, appropriate environments, materials, activities and teaching/guidance techniques.

CDEC 2366 Practicum in Child Development and Early Childhood
3 Hours (0-0-21)
This course is a practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: Basic skills certificate or AAS majors only.

CETT 1402 Electricity Principles
4 Hours (3-3)
Principles of electricity including proper use of test equipment, A/C and D/C circuits, and component theory and operation. Students will identify basic principles of electricity (A/C and D/C), voltage, current, and circuitry; apply Ohm’s law to electrical calculations; use test equipment to measure continuity voltage, and current values; and use electrical safety practices.

CETT 2380 Cooperative Education - Computer Engineering Technology/Technician
3 Hours (1-0-20)
Career related activities encountered in the student’s area of specialization are offered through a cooperative agreement between the 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 work experience. This course may be repeated if topics and learning outcomes vary. Prerequisite: 12 semester credit hours.

CHEM 1104 Chemical Calculations
1 Hour (1-0)
Study of the mathematical application used in chemistry. Designed for science and engineering students. Lab fee required.

CHEM 1405 Introductory Chemistry
4 Hours (3-4)
This survey course for non-science majors will enable these students to comprehend the fundamental concepts of chemistry and will fulfill four credit hours of the lab science requirement.

CHEM 1411 General Inorganic Chemistry I
4 Hours (3-3)
This course will enable students to become proficient in stoichiometry, chemical equations, atomic structure, chemical bonding, reactions, gas laws, liquids and solids, and solutions. A knowledge of algebra is needed.

CHEM 1412 General Inorganic Chemistry II
4 Hours (3-3)
This course will enable students to become proficient in acid-base theory, oxidation-reduction reactions, chemical kinetics, aqueous equilibria, electrochemistry, and organic chemistry. Prerequisite: “C” or greater in CHEM 1411.
COMM 2389 Academic Cooperative
3 Hours (3-3)
An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of communication.

COMM 2300 Media Literacy and Society
3 Hours (3-0)
This class is designed to criticize and analyze the function, role, and responsibility of the mass media in modern society from the consumer perspective. The course includes the ethical problems and issues facing each media format, with the effect of political, economic, and cultural factors on the operation of the media. Students will study the media influence throughout history on the formation of governments and private sector organizations. The course will explore the enrichment as well as negative consequences that media has brought to society.

COMM 2301 Introduction to Technology and Human Communication
3 Hours (3-0)
A survey of emerging interactive communication technologies and their influence on human communication, including interpersonal, group decision-making, and public and private communication contexts.

COMM 2305 News Editing
3 Hours (3-3)
A course in which copy editing, rewriting, proofreading, headline writing, and layout are emphasized. Lab work on newspaper or/magazine required. Prerequisite: COMM 2309.

COMM 2311 News Gathering and Writing
3 Hours (3-3)
A study of fundamental news gathering and writing in which the students learn the evaluation of news, news gathering problems, and techniques, writing leads, organizing stories, and overcoming grammatical and structural problems. Lab work on newspaper staff required.

COMM 2315 News Gathering and Writing I
3 Hours (3-0)
A course in which the student learns to write newspaper and magazine feature and editorial material with emphasis on marketing of articles and research methods for article writing. Students study philosophy of news selection, ethics of communication, and responsibility in reporting. Work on the student newspaper or magazine is required. Prerequisite: COMM 2311 or consent of instructor.

COMM 2316 Interviewing
3 Hours (3-0)
A course designed to enable the student to apply communication concepts in selected interview settings with emphasis on dyadic communication, questioning techniques, interview structure, and persuasion.

COMM 2327 Principles of Advertising
3 Hours (3-0)
An overview of the broad field of advertising. This course acquaints students with the role of advertising in the American economy and society. Students study TV, radio, print advertising functions, and support advertising forms such as direct mail, transit, and outdoor media. Students create ads as part of an advertising campaign project.

COMM 2330 Introduction to Public Relations
3 Hours (3-0)
A course exploring the history and development of public relations and presenting the theory and process of public relations— including the planning, implementation, and evaluation of PR campaigns.

COMM 2332 Radio/Television News
3 Hours (3-0)
Preparation and analysis of news styles for the electronic media.

COMM 2339 Writing for Radio, Television, & Film
3 Hours (3-0)
Introduction to basic script formats, terminology, and writing techniques, including the writing of commercials, public service announcements, promotions, news, documentary, and fictional materials.

COSC 1330 Computer Programming
3 Hours (3-1)
Introduction to computer programming in various programming languages. 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.

COSC 1336 Programming Fundamentals I
3 Hours (3-1)
Introduces the fundamental concepts of structured programming. Topics include software development methodology, data types, control structures, functions, arrays, and the mechanics of running, testing, and debugging. This course assumes computer literacy.

COSC 1337 Programming Fundamentals II
3 Hours (3-1)
Review of control structures and data types with emphasis on structured data types. Applies the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design. Includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering. Prerequisite: COSC 1336 or instructor permission.

COSC 2330 Advanced Structured Languages
3 Hours (3-4)
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. Prerequisite: COSC 1330 or instructor permission.

COSC 2336 Programming Fundamentals III
3 Hours (3-1)
Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis. Prerequisite: COSC 1337 or instructor permission.

CPMT 1445 Computer Systems Maintenance
4 Hours (3-3)
Functions of the components within a computer system. Development of skills in the use of test equipment and maintenance aids. Students will describe the functions of components in a computer system; use computer related test equipment; and demonstrate the effective use of maintenance tools.
CPMT 2380 Cooperative Education - Computer Maintenance Technology/Technician
3 Hours (1-0-20)
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. As outlined in the learning plan, apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. This course may be repeated if topics and learning outcomes vary. Prerequisite: 12 semester credit hours.

CPMT 2445 Computer Systems Troubleshooting
4 Hours (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. The student will develop hardware and software troubleshooting techniques and perform procedures used in troubleshooting. Prerequisites: CPMT 1445 or instructor permission.

CRIJ 1301 Introduction to Criminal Justice
3 Hours (3-0)
Introduction to the criminal justice system. Topics include the history, philosophy and ethical considerations of criminal justice; definitions of crime and development of appropriate vocabulary; the nature and impact of crime; components of the criminal justice system and an introduction to law and legal concepts.

CRIJ 1306 Court Systems and Practices
3 Hours (3-0)
A study of the role of the judiciary in the criminal justice system. Topics include the structure of the Texas court system; prosecution of offenders; the right to counsel; pretrial release; grand jury processes; the adjudication of crimes; rules of evidence and sentencing using Texas statutes as illustrations.

CRIJ 1307 Crime in America
3 Hours (3-0)
The study of crime problems and theories in historical perspective. Topics include social and other factors affecting crime; the impact of crime on society; crime trends; social characteristics of specific crimes; crime prevention and the crime victim.

CRIJ 1310 Fundamentals of Criminal Law
3 Hours (3-0)
A study of the nature of criminal law. Topics include the philosophical and historical development of law; major definitions and concepts; classifications of laws and penalties and criminal responsibility using Texas statutes as illustrations.

CRIJ 1313 Juvenile Justice System
3 Hours (3-0)
A study of the juvenile court process. Topics include specialized juvenile law; the roles of the juvenile court, police agencies and correctional agencies; theories concerning causes and treatment of delinquency using Texas statutes as illustrations.

CRIJ 2301 Community Resources in Corrections
3 Hours (3-0)
An overview of diversionary practices and treatment programs utilized in the local setting. Topics include correctional theories and practices; selected models of corrections and future trends in community corrections using Texas statutes as illustrations.

CRIJ 2313 Correctional Systems and Practices
3 Hours (3-0)
A study of the role of corrections in the criminal justice system. Topics include the history of corrections; organization and theory of correctional systems; institutional operations; alternatives to institutionalization; treatments and rehabilitation and current and future trends in correction.

CRIJ 2314 Criminal Investigation
3 Hours (3-0)
A study of the theory of criminal investigations. Topics include the historical development of investigative techniques; the collection and preservation of evidence; sources and techniques of gathering information; the use of forensic science in criminal investigations; methods of conducting investigations and preparing cases for trial.

CRIJ 2323 Legal Aspects of Law Enforcement
3 Hours (3-0)
A study of the legal authority of the police. Topics include responsibilities of and restraints upon the police; constitutional aspects of police work; laws of arrest, search and seizure and police liability using Texas statutes and cases as illustrations.

CRIJ 2328 Police Systems and Practices
3 Hours (3-0)
An examination of police work as a profession. Topics include the organization of law enforcement systems; police discretion; ethics; police-community relations and current and future issues facing law enforcement professionals. This course is the capstone course for Associate of Applied Science-Law Enforcement degrees. Co-requisites/prerequisites: CRIJ 1301; CRIJ 1306; CRIJ 1310; CRIJ 2313 or consent of instructor.

CSME 1254 Artistry of Hair Design I
2 Hours (0-7-0)
Introduction to hair design. Topics include the theory and applications of wet styling, thermal hair styling, and finishing techniques.

CSME 1410 Introduction to Hair Cutting and Related Theory
4 Hours (2-8-0)
Introduction to the theory and practice of hair cutting. Topics include terminology, implements, sectioning and finishing techniques.

CSME 1443 Manicuring and Related Theory
4 Hours (2-5-0)
Presentation of the theory and practice of nail technology. Topics include terminology, application, and workplace competencies related to nail technology.

CSME 1447 Principles of Skin Care/Facials and Related Theory
4 Hours (2-5-0)
In-depth coverage of the theory and practice of skin care, facials, and cosmetics.
ECON 2302 Principles of Microeconomics  
3 Hours (3-0)  
The students will study microeconomic theory and the operation of individual firms and industries. Topics will include supply and demand, opportunity costs, the concept of utility, cost curves and revenue curves, and the various forms of business organizations.

EDUC 1200 Student Success Seminar  
2 Hours (2-1)  
Addresses the knowledge necessary for college success; develops the skills necessary to study and learn; and develops competence in finding information and resources. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual bases for this introduction to college-level student academic strategies. Students develop educational plans and use assessment instruments (e.g., learning inventories) to help them identify their own strengths and weaknesses as strategic learners. (Cross-listed as PSYC 1200)

EDUC 1301 Introduction to the Teaching Professions  
3 Hours (3-1)  
An enriched integrated pre-service course designed to provide active recruitment and institutional support for students interested in a teaching career. Early Childhood (EC)-12. This Course meets State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Includes 16 contact hours of field experience.

EDUC 2301 Introduction to Special Populations  
3 Hours (3-1)  
An enriched integrated pre-service course that provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic and academic diversity and equity with an emphasis on factors that facilitate learning. Content is aligned with State Board for Educator Certification Pedagogy and Professional Responsibilities standards and includes 16 contact hours of field experience. Prerequisite: EDUC 1301.

ELMT 1305 Basic Fluid Power  
3 hours (2-2)  
Basic fluid power course covering pneumatic and hydraulic systems, fluid power symbols, operating theory, components, and basic electrical and manual controls. Students will identify fluid power symbols; demonstrate knowledge of basic fluid power theory; demonstrate knowledge of component operation; generate basic fluid power circuits; and demonstrate fluid power circuits using electrical and manual controls.

ELMT 1371 Automation  
3 hours (2-2)  
Electrical and electronic principles and basic programming techniques. Includes terminology, classification, basic components, control systems, alternating current and hydraulic servomechanisms, programming, sensors, types of drive, and safety and design procedures. The student will demonstrate integration of automated systems; describe operations and applications of hydraulic and electro-hydraulic controls; maintain, troubleshoot, repair, or replace electrical devices found in automated systems; and apply programming techniques.

ELMT 2370 Pumps and Electromechanical Drives  
3 hours (2-2)  
A study of basic electro-mechanical devices found in energy-related equipment. Includes pumps, compressors, and components of mechanical power transmission systems. The student will describe the operation and characteristics of mechanical power transmission systems and troubleshoot problems with pumps, compressors, and mechanical drives.

ELMT 2371 Electromechanical Troubleshooting  
3 hours (2-2)  
Techniques used to troubleshooting various types of mechanical, electrical, hydraulic, and pneumatic systems and their control devices. Emphasizes the use of schematics and diagrams in conjunction with proper troubleshooting procedures. The student will apply proper test equipment for problem analysis; find test point locations and perform troubleshooting procedures using schematics and diagrams; isolate faults; and perform routine maintenance.

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

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

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

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

EMAP 2355 Disaster Recovery  
3 Hours (3-0)  
Policies, concepts, and procedures of recovery. Addresses the various federal and state assistance programs. Emphasizes coordination of damage assessment, preparing documentation, and recovery procedures. This course is equivalent to the Texas Department of Emergency Management and the Federal Management Agency course G620.
ENER 1330 Basic Mechanical Skills for Energy
3 Hours (2-2)
Basic mechanical skills using hand and power tools in an industrial environment. Topics include tool use and maintenance, lubrication, measuring, threads and fasteners, bench works, basic mechanical drawings, and basic shop calculations (English and metric). Also addresses rigging procedures to include chain falls, jacks, cable, fulcrum, port-a-power, and come-alongs. Students will use basic hand, hand power, and stationary power tools; select appropriate Bill of Materials (BOM); interpret basic mechanical drawings and perform associated calculations; apply measuring tools; perform bench work including part layout, drilling, reaming, tapping, press fitting, location of hole centers; perform preventative maintenance on tools; describe basic lubrication practices; demonstrate basic rigging procedures; and employ good housekeeping, environmental awareness, safety procedures, sensory skills, and preventative maintenance.

ENGL 0171 Intermediate Writing II
1 Hour (0-1)
Required for student taking ENGL 1301 under the “C” or better option. Student must make a “C” in this course and a “C” in ENGL 1301 to fulfill college writing readiness requirement.

ENGL 0270 Intermediate Writing I
2 Hours (0-2)
A writing-intensive lab course designed to prepare the student for college writing readiness. Prerequisite: ENGL 0371/0371.

ENGL 0370 Developmental Writing I
3 Hours (3-1)
A course designed to assist students to become more proficient in grammar, mechanics, expository writing, vocabulary, and critical reading. Students are required to work on writing, vocabulary, grammar, and punctuation in writing lab.

ENGL 0371 Developmental Writing II
3 Hours (3-1)
A course designed to assist students to become more proficient in grammar, mechanics, expository writing, vocabulary, and critical reading. Students are required to work on writing, vocabulary, grammar, and punctuation in writing lab.

ENGL 1301 Composition and Rhetoric
3 Hours (3-0)
A course designed to help students develop reading and writing skills by studying diction, syntax, paragraph development, grammar, vocabulary and essay organization and by writing expository paragraphs and essays. Course assignments will include a minimum of 6000 words of writing. Prerequisite: 220+ THEA Writing and 230 THEA Reading or 70/6 Compass Writing and 81 Compass Reading or successful completion of developmental education sequence. Co-requisite: ENGL 0181, when taken as culmination of developmental education sequence.

ENGL 1302 Composition and Literature
3 Hours (3-0)
A course designed to enable students to further their composition skills by writing multi-paragraph essays, including a research paper; to write logically; and to read, research, analyze, and discuss the literary genres of poetry, short fiction, and drama. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 2307 Creative Writing
3 Hours (3-0)
A course designed to enable students to investigate and discuss the creative process, to study and practice techniques of creative writing; and to read, analyze, discuss, and write two or more of the following: narrative essays, poems, short stories, and researched reviews/abstracts. Course assignments will include a minimum of 6000 words of writing. Credit will be given only once for ENGL 2307.

ENGL 2308 Advanced Studies in Creative Writing
3 Hours (3-0)
An advanced course designed to enable students to investigate and discuss the creative Process; to study and practice techniques of creative writing; and to read, analyze, discuss, and write one or more of the following: narrative essays, poems, short stories, and plays. Credit will be given only once for ENGL 2308. Prerequisite: ENGL 1301.

ENGL 2311 Technical Writing
3 Hours (3-0)
A course designed to enable students to investigate and discuss the creative Process; to study and practice techniques of creative writing; and to read, analyze, discuss, and write one or more of the following: narrative essays, poems, short stories, and plays. Credit will be given only once for ENGL 2311.

ENGL 2314 Technical & Business Writing I
3 Hours (3-0)
First semester of a study designed to enable students to organize and prepare basic technical materials in the following areas: abstracts; proposals, technical descriptions, instructional processes, informational processes, technical definitions, progress reports; formal technical reports, graphics, and business correspondence. Course is designed also to enable students to analyze audience and present oral reports. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 2315 Technical & Business Writing II
3 Hours (3-0)
Second semester of a study designed to enable students to organize and prepare materials for college-level scientific, technical, or business writing. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1301.

ENGL 2321 Masterworks of British Literature
3 Hours (3-0)
The study of longer significant works of British literature, including study of movements, schools, or periods. Prerequisite: ENGL 1302. Course assignments will include a minimum of 6000 words of writing.

ENGL 2322 British Literature Anglo-Saxon Period through Neo-Classical
3 Hours (3-0)
A course designed to enable students to develop a historical perspective on the development of ideas and literary techniques by studying major authors, works, and trends in English literature from the Anglo-Saxon Period through the Neo-classical Age. Students will develop their critical thinking, research, and writing skills. Course assignments will include a minimum of 6000 words of writing. Prerequisite: ENGL 1302.
FREN 1411 Elementary French I
4 Hours (3-4)
This course is for students who have no previous instruction in French. It is designed to acquaint the student with the four basic language skills: listening, speaking, reading, and writing with emphasis on speaking and comprehension. Grammar and vocabulary are presented through intensive drills in class and the Language Laboratory.

FREN 1412 Elementary French II
4 Hours (3-4)
This is a conversation course conducted primarily in French for the students who have completed French 1411 or its equivalent. Intensive oral-aural drill and classroom interaction will enable the student to master the lexical and grammatical structures necessary in carrying on conversations in French. Prerequisite: FREN 1411.

FREN 2303 Introduction to French Literature
3 Hours (3-0)
This course is designed for those students who wish to acquire a basic background in French literature and culture. The course includes the reading of cultural essays, short stories, and poetry that are the basis for class discussion and composition. Practice in speaking, reading, and writing provide for vocabulary expansion. Prerequisite: FREN 2312.

FREN 2311 Intermediate French I
3 Hours (3-2)
This course is conducted in French, and it includes a comprehensive review of French grammar and structure. Through classroom drill, discussion, and composition, the course emphasizes vocabulary expansion and the acquisition of a basic knowledge of French culture and literature. Prerequisite: FREN 1412.

FREN 2312 Intermediate French II
3 Hours (3-2)
Continuation of French 2311. Prerequisite: FREN 2311.

GAME 1306 Design and Creation of Games
3 Hours (3-1)
Introduction to game and simulation development. Includes analysis of existing applications and creation of a game using an existing game engine. In-depth coverage of the essential elements of game design. Also covers an overview of cultural history of electronic games, survey of the major innovators, and examination of the trends and taboos that motivate game design. Students will be able to summarize the evolution of the electronic game industry, explain essential game and simulation elements, evaluate the strengths and limitations of game and simulation systems, identify programmatic and graphical elements of a development system, and develop a concept document and simple game.

GAME 2341 Game Scripting
3 Hours (3-1)
Scripting languages with emphasis on game concepts and simulations. Students will describe the role of scripts in the development of games, simulations, and other software; and apply appropriate scripting structure and syntax for game and/or simulation software development. Prerequisite: GAME 1306 or permission of instructor.

GEOG 1301 Physical Geography
3 Hours (3-0)
This course is designed to introduce students to the study of the processes driving physical systems on the earth and the interactions between these physical systems with an emphasis on human interaction with the physical environment.

GEOG 1303 World Regional Geography
3 Hours (3-0)
In this course, students will study the major world geographic regions with an emphasis on prevailing social and environmental conditions and developments. Included are emerging conditions and trends and the awareness of diversity. Course content may include one or more regions.

GEOL 1401 Earth Sciences I
4 Hours (3-3)
Survey of physical and historical geology, astronomy, meteorology, oceanography, and related sciences. This course is designed for non-science majors.

GEOL 1403 Physical Geology
4 Hours (3-3)
This course is designed to enable students to become familiar with the geologic features and processes of the earth. This is a foundation course for geology majors, and may also be taken by non-majors for lab science requirement.

GEOL 1404 Historical Geology
4 Hours (3-3)
This course is designed to enable students to become familiar with the geologic history of the earth. This is a foundation course for geology majors and may be taken by non-majors for lab science requirement. Prerequisite: GEOL 1403 or consent of instructor.

GEOL 1405 Environmental Science
4 Hours (3-3)
The study of environmental science is interdisciplinary. During the semester, the student will be presented with scientific information concerning the environment and the historical, social, political, and economic ramifications of environmental conflict. The course is suitable as an elective course in a science curriculum or as a required lab science for someone who is not majoring in science.

GEOL 1447 Meteorology
4 Hours (3-3)
Study of and practical experience in weather analysis, methods of instrumentation and observational meteorology. Lab fee required. This course is designed for non-science majors.

GEOL 2409 Mineralogy
4 Hours (3-3)
Introduction to physical, chemical, crystallographic properties, symmetry, and form, for identification and description of minerals. Chemical and physical processes governing classification origin and occurrence of minerals and rocks. Basic theories and techniques for determining optical constants of minerals using the petrographic microscope. Prerequisites: GEOL 1403.

GERM 1411 Elementary German I
4 Hours (3-4)
This course is for students who have no previous instruction in German. It is designed to acquaint the student with the four basic language skills: listening, speaking, reading, and writing with emphasis on speaking and comprehension. Grammar and vocabulary are presented through intensive drills in class and in the Language Laboratory.
GERM 1412 Elementary German II
4 Hours (3-4)
This is a conversation course conducted primarily in German for the student who has completed German 1411 or its equivalent. Intensive oral-aural drill and classroom interaction will enable students to master the lexical and grammatical structures necessary in carrying on conversations in German. Prerequisite: GERM 1411.

GERM 2311 Intermediate German I
3 Hours (3-2)
This course is conducted in German, and it includes a comprehensive review of German grammar and structure. Through classroom drill, discussion, and composition, the course emphasizes vocabulary expansion and the acquisition of a basic knowledge of German culture and literature. Prerequisite: GERM 1412.

GERM 2312 Intermediate German II
3 Hours (3-2)
A course designed to provide fluency in spoken and written German through intensive grammar presentation and review, through conversational practice, and through composition and reading. The course is conducted in German. Prerequisite: GERM 2311.

GOVT 2301 Federal and State Government I
3 Hours (3-0)
This course is a comparative investigation of federal and state government. It covers the foundation and development of the constitutions of the United States and Texas (Federalism), local governments, political parties, and interest groups.

GOVT 2302 Federal and State Government II
3 Hours (3-0)
In this class students will study the legislative, executive (including the bureaucracy), and judicial systems of the U.S. and Texas, and selected problems of public policy.

GOVT 2304 Introduction to Political Science
3 Hours (3-0)
This course is the introduction to the study of political science as a discipline-political philosophy, the theory and organization of the modern state, comparative political systems, and international relations.

GOVT 2311 Mexican-American Politics
3 Hours (3-0)
This course examines the historical and socio-political culture, and the political experience of Mexican-Americans at the local, state, and national level in the United States.

GOVT 2389 Government Internship
3 Hours (3-4)
This course is designed to integrate on-campus study with practical hands-on experience in government. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of government.

GRPH 1359 Object Oriented Computer Graphics
3 Hours (2-4)
Mastery of the tools and transformation options of an industry standard draw program to create complex illustrations and follow them through to the color output stage. Mastery in the use of basic elements of good layout and design principles and use of the capabilities specific to vector (object oriented) drawing software to manipulate both text and graphics with emphasis on the use of bezier curves. Acquisition of images via scanning and the creative use of clip art is included.

HART 1380, 2380 Cooperative Education
3 Hours (1-0-20)
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. The student is required to work for wages at least 20 hours per week in air conditioning, refrigeration or a related field.

HART 1391 Special Topics in Heating, Air Conditioning, and Refrigeration Technologies/Technicians
3 Hours (2-2)
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.

HART 1401 Basic Electricity for HVAC
4 Hours (3-3)
Principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation. The class will begin with basic electricity and progress through the study of transformers, power distribution, electric motors, motor controls and circuitry. The student will be introduced to the proper operation of various electrical meters and test instruments. This course, and HART 1407 must be taken first as the prerequisite to all the HART classes.

HART 1407 Refrigeration Principles
4 Hours (3-3)
An introduction to the refrigeration cycle, heat transfer theory, temperature/pressure relationship, refrigerant handling, refrigeration components and safety. The student will learn proper soldering and brazing techniques using oxy-acetylene and air-acetylene. The student will also be introduced to the proper use of hand tools and test instruments required in both service and installation. This course, and HART 1401 must be taken first as the prerequisite for all the other HART courses.

HART 1441 Residential Air Conditioning
4 Hours (3-3)
A study of components, applications, and installation of mechanical air conditioning systems including operating conditions, troubleshooting, repair, and charging of air conditioning systems. This course covers proper recovery, recycle, and reclaim procedures. The student will also study the chemical make-up of refrigerants and how they affect the atmosphere. Replacement refrigerants and the problems they pose will also be covered. The student will gain a working knowledge of the various components used in air conditioning and refrigeration systems. The student will study various refrigerant oils and the type refrigerants they are designed for. Prerequisite: HART 1401 and HART 1407.

HART 1445 Gas and Electric Heating
4 Hours (3-3)
A study of the procedures and principles used in servicing heating systems including gas fired and electric furnaces. The student will be introduced to proper testing and troubleshooting techniques. The class will cover proper wiring, gas controls, thermostats, spark ignition and venting procedures. Prerequisite: HART 1401.
HART 2434 Advanced Air Conditioning Controls
4 Hours (3-3)
Theory and application of electrical control devices, electromechanical controls and/or pneumatic controls. This course covers the proper methods for troubleshooting electrical control devices and control circuits. The student will study the correct wiring for components such as lock-out relays, oil failure controls, and thermostats. The student will be introduced to solid state controls and their functions. Prerequisite: HART 1401.

HART 2436 Air Conditioning Troubleshooting
4 Hours (3-3)
An advanced course in application of troubleshooting principles and use of test instruments to diagnose air conditioning and refrigeration components and system problems including conducting performance tests. The student will use knowledge gained from previous classes or industry experience in order to improve their skill in determining system problems. Prerequisite: HART 1441 and HART 2442.

HART 2442 Commercial Refrigeration
4 Hours (3-3)
Theory of and practical application in the maintenance of commercial refrigeration; medium, and low temperature applications and ice machines. The student will be introduced to various controls and components used in these applications. This course covers piping procedures, wiring, operation, and troubleshooting. The student will also study air cooled, water cooled, and evaporative condensers and their applications. Prerequisite: HART 1401 and HART 1407.

HART 2445 Air Conditioning Systems Design
4 Hours (4-0)
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. This course covers psychometrics and design procedures developed to select proper equipment for air conditioning systems. The student will be introduced to manual J for heating and cooling loads. The student will also study proper duct sizing and design techniques. Prerequisite: HART 1401 or Instructor Approval. Capstone course.

HART 2449 Heat Pumps
4 Hours (3-3)
A study of heat pumps, heat pump control circuits, defrost controls, auxiliary heat, air flow, and other topics related to heat pump systems. This course covers specialized refrigeration systems such as heat pumps, cascade systems, chill water systems, and gas absorption systems. The student will learn the distinctive type controls and equipment necessary for these systems. Prerequisite: HART 1401 and HART 1407.

HIST 1301 United States History To 1877
3 Hours (3-0)
This course is a survey of U.S. history from the beginnings through Reconstruction. It includes such topics as the European heritage, the colonies in North America, the creation and development of the American nation, and the sectional differences that led to the Civil War and Reconstruction.

HIST 1302 United States History Since 1877
3 Hours (3-0)
This class is a survey of U.S. history from Reconstruction to the present. Topics include the development of the West, the growth of big business and its accompanying problems, American Imperialism, the causes and results of World Wars I and II, and the post war world. May be taken before 1301.

HIST 1316 History of Christianity
3 Hours (3-0)
This course is an historical survey of the development of Christianity and its role in world history, from its origins to the present time covering theological and institutional issues. Course may be taken for either credit or non-credit. Also PHIL 1316.

HIST 2301 Texas History
3 Hours (3-0)
This class covers the history of Texas from pre-Columbian times to the present. Topics will include native American cultures, colonization by Europeans, the Texas Republic, the Civil War, and modern Texas. Emphasis will be given to the roles of ethnic groups and women. May be substituted for one semester of U.S. History.

HIST 2311 Western Civilization I
3 Hours (3-0)
This course is a history of Western civilization before c. 1500, stressing the origin and development of political, economic, and religious institutions. The class also covers the theory and practice of historical research.

HIST 2312 Western Civilization II
3 Hours (3-0)
This course is a history of Western civilization since c. 1500, stressing imperialism, nationalism, revolution, and the rise of science. The class also covers the theory and practice of historical research.

Students may receive credit for only two of HIST 2321, HIST 2322, HIST 2323

HIST 2321 World Civilizations I
3 Hours (3-0)
This class surveys the origin and development of civilizations in Asia, Africa, Europe, and the Americas from the beginning to c. 1500. Material stresses the origin and development of political, economic, and religious institutions. The class also covers the theory and practice of historical research.

HIST 2322 World Civilizations II
3 Hours (3-0)
This course continues the development of world civilizations in response to Western expansion from c. 1500. Topics stress imperialism, nationalism, revolution, and the rise of science. The class also covers the theory and practice of historical research.

HIST 2323 Eastern Civilization
3 Hours (3-0)
This course is a history of Eastern civilization. It covers Islamic, Indian, Chinese, and Japanese civilizations from their beginnings to the present. The class also covers the theory and practice of historical research.

HIST 2327 Mexican-American History
3 Hours (3-0)
This course is a general survey of the experience of Americans of Mexican ancestry in the development of American society. The class will emphasize Native American and Spanish culture along with political, economic, and social events.
HMSY 1343 Weapons of Mass Destruction
3 Hours (3-0)
This course covers hazard and risk assessment, crime scene preservation, chemical agents, biological agents, radiological agents, explosive devices, detection-sampling and plume models, and personal protection methods. The critical role of first responders in weapons of mass destruction, mitigation, and survival will also be presented. Discussion will include historical events related to the use of weapons of mass destruction. Students will identify weapons of mass destruction and means of dissemination; and compare the different biological, chemical, and radiological materials used in weapons of mass destruction.

HPR 3200 Pathophysiology
3 Hours (3-0-0)
This course is a study of the pathology and general health management of diseases and injuries across the life span. Topics will include etiology, symptoms, pharmacology and the physical and psychological reactions to diseases and injuries. Prerequisite: BIOL 2401 or VNSG 1420.

HUM 1301 Humanities I
3 Hours (3-0)
“Humanities I” invites students to expand their appreciation of the cultural side of human experience on the premise that a complete education should stimulate the intellect as well as provide skills and job training. This course will offer selected, interrelated topics in philosophy, literature, religion, and the arts and sciences from ancient times to the year 1500. Coverage will be interdisciplinary and multi-cultural, and will include readings, various media, and performance.

HUM 1302 Humanities II
3 Hours (3-0)
“Humanities II” complements Humanities I by inviting students to expand their appreciation of the cultural side of human experience further on the premise that a complete education must stimulate the intellect as well as provide skills and job training. This course will offer selected and varying topics in philosophy, literature, religion, and the arts and sciences from about 1500 to the present. Coverage will be interdisciplinary and multi-cultural, and will include readings, various media, and performance. THERE IS NO PREREQUISITE FOR THIS COURSE.

IMED 1316 Web Design I
3 hours (3-1)
Instruction in web design and related graphic design issues including mark-up languages, web sites, and browsers. Students will identify how the Internet functions with specific attention to the World Wide Web and file transfer; apply design techniques in the creation and optimization of graphics and other embedded elements; demonstrate the use of World Wide Web Consortium (W3C) formatting and layout standards; and design, create, test, and maintain a web site.

ITCC 1401 Cisco Exploration I-Netword Fundamentals
4 Hours (3-3)
A course introducing the architecture, structure, functions, components, and models of the internet. Describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. Students will identify and describe internet architecture, structure, functions, components, and models; describe the use of OSI and TCP layered models; identify and describe the nature and roles of protocols and services at the application, network, data link, and physical layers; describe principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations; and build simple LAN topologies by applying basic principles of cabling, device configuration, and IP subnetting.

ITCC 1404 Cisco Exploration 2-Routing Protocols and Concepts
4 Hours (3-3)
This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes. Students will describe the purpose, nature, and operations of a router; describe the purpose and nature of routing tables; describe the purpose and procedure of configuring static routes; design and implement a classless IP addressing scheme for a given network; describe the basis features and concepts of link-state routing protocols; and configure and verify basic RIPv1, RIPv2, single area OSPF, and EIGRP operations in a small routed network. Prerequisite: ITCC 1401.

ITCC 2408 Cisco Exploration 3-LAN Switching and Wireless
4 Hours (3-3)
This course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks. Detailed explanations of LAN switch operations, VLAN implementation, Rapid Spanning Tree Protocol (RSTP), VLAN Trunking Protocol (VTP), Inter-VLAN routing, and wireless network operations. Analyze, configure, verify, and troubleshoot VLANs, RSTP, VTP, and wireless networks. Campus network design and Layer 3 switching concepts are introduced. Students will identify and correct common network problems at layers 1, 2, 3, and 7 using a layered model approach; select the appropriate media, cables, ports, and connectors to connect switches to other devices and hosts; perform and verify initial switch configuration tasks including remote access management; configure, verify, and troubleshoot VLANs, VLAN Trunking, Inter-VLAN routing, VTP, and RSTP; verify network status and switch operation using basic utilities (ping, traceroute, telnet, SSH, arp, ipconfig); identify and describe the purpose of the components in a small wireless network (SSID, BSS, ESS); and identify the basic parameters to configure on a wireless network to ensure that devices connect to the correct point. Prerequisite: ITCC 1404.
ITNW 1425 Fundamentals of Networking Technologies  
4 Hours (3-2)  
Instruction in networking technologies and their implementation. Topics include the OSI reference model, network protocols, transmission media, and networking hardware and software. Students will identify and use network transmission media; explain the OSI model; identify the characteristics of network topologies and protocols; identify the functions of a network operating system and distinguish between centralized, client/server, and peer-to-peer systems; and distinguish between Local Area Networks (LANs) and Wide Area Networks (WANs) and identify the components used to expand a LAN into a WAN.

ITNW 1454 Implementing and Supporting Servers  
4 hours (3-3)  
Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment. Students will configure peripherals and devices; set up servers; configure directory replication; manage licensing; create and manage system policies, and profiles; administer remote servers and disk resources; create and share resources; implement fault-tolerance; configure servers for interoperability; install and configure Remote Access Service (RAS); and identify and monitor performance bottlenecks and resolve configuration problems.

ITSC 1407 UNIX Operating System I  
4 Hours (3-3)  
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. The student will demonstrate proper use of basic UNIX commands; define and apply terminal emulation; use the system editor to create script files; create and manage user accounts; and effectively manage the user file system.

ITSC 1409 Integrated Software Applications I  
4 Hours (3-3)  
Introduction to business productivity software suites using word processing, spreadsheets, databases, and/or presentation software. Students will use word processing, spreadsheet, database, and/or presentation software; and integrate applications to produce documents.

ITSC 2437 UNIX Operating System II  
4 Hours (3-3)  
Continued study of the UNIX operating system commands. Includes topics such as CGI and scripting languages. Students will solve intermediate problems using UNIX commands such as SED, AWK, and GREP from the command line and in the basic scripts; and develop CGI script using a scripting language. Prerequisite: ITSC 1407 or instructor permission.
ITSE 1331 Introduction to Visual BASIC Programming
3 Hours (3-1)
Introduction to computer programming using Visual Basic. Emphasizes the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files. Students will use structured programming techniques; develop executable programs; create appropriate documentation; and create applicable graphical user interfaces.

ITSE 1356 Extensible Markup Language (XML)
3 Hours (3-0)
Introduction of skills and practices related to Extensible Markup Language (XML). Includes Document Type Definition (DTD), wellformed and valid XML documents, XML schemes, and Extensible Style Language (XSL). Students will design and apply XML to create markup language for data and document centric application; use XSL to transform XML documents to different formats including HTML, text XML, and others; and render an XML document on a browser.

ITSE 1380, 2380 Cooperative Education - Computer Programming/Programmer
3 Hours (1-0-20)
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. 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. As outlined in the learning plan, the student will master the theory, concepts, and skills involving the tools, materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, and legal systems associated with the particular occupation and the business/industry; demonstrate ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable technical language of the occupation and the business or industry. Prerequisite: 12 semester credit hours or instructor permission.

ITSE 1445 Introduction to Oracle SQL
4 Hours (3-3)
An introduction to the design and creation of relational databases using Oracle. Topics include storing, retrieving, updating, and displaying data using Structured Query Language (SQL). The student will write Structured Query Language (SQL) statements using Oracle; select and sort data; and produce reports with SQL Plus. The student will create and manage tables which include constraints; create Views and other database objects; and develop procedures and functions using PL/SQL.

ITSE 2313 Web Authoring
3 Hours (3-1)
Instruction in designing and developing web pages that incorporate text, graphics, and other supporting elements using current technologies and authoring tools. The student will create functional web pages and supporting elements using current authoring tools; and maintain web pages and supporting elements.

ITSE 2349 Advanced Visual BASIC Programming
3 Hours (3-1)
Advanced Visual Basic programming including file access methods, data structures, modular programming, program testing and documentation. Students will design and write Visual Basic programs containing data structures and input/output file handling; develop graphical user interfaces; and integrate external programs and libraries with Visual Basic applications. Prerequisite: ITSE 1331 and ITSE 2409 or instructor permission.

ITSE 2409 Database Programming
4 Hours (3-3)
Database development using database programming techniques emphasizing database structures, modeling, and database access. Students will develop database applications using a structured query language; create queries and reports from database tables; implement data integrity; optimize query performance; create and maintain indexes; and create appropriate documentation.

ITSE 2447 Advanced Database Programming
4 Hours (3-3)
Database development using complex database programming techniques emphasizing multiple interrelated files, menu design, security implementation, and multiple access. Students will develop complex database applications using a structured query language; implement security and error trapping; and develop menu-driven database systems. Prerequisite: ITSE 1331 and ITSE 2409 or instructor permission.

ITSE 2454 Advanced Oracle PL/SQL
4 Hours (3-3)
A continuation of Oracle SQL. Topics include hierarchical queries, set based queries, correlated subqueries, scripting, and scripting generation. The student will retrieve data including SET operators, correlated subqueries, and hierarchical queries; write SQL scripts that generate other SQL scripts; and write and execute a script that generates a script of drop table commands and insert commands; create procedures and functions; create a package to group together variables, cursors, exceptions, procedures, and functions; and invoke a package constraint. Prerequisite ITSE 1445 or instructor permission.

ITSW 1401 Introduction to Word Processing
4 Hours (3-3)
An overview of the production of documents, tables, and graphics. The student will identify word processing terminology and concepts; create technical documents; format and edit documents; use simple tools and utilities; and print documents. Prerequisite: POFT 1227 or instructor permission.

ITSW 1404 Introduction to Spreadsheets
4 Hours (3-3)
Instruction in the concepts, procedures, and importance of electronic spreadsheets. The student will identify spreadsheet terminology and concepts; create formulas and functions; use formatting features; and generate charts, graphs, and reports.

ITSW 1407 Introduction to Database
4 Hours (3-3)
Introduction to database theory and the practical applications of a database. The student will identify database terminology and concepts; plan, define, and design a database; design and generate tables, forms, and reports; and devise and process queries. Prerequisite: Knowledge of software files management and keyboarding skills.
Kinesiology/Physical Education activity classes at Midland College are designed to supplement the overall education experience through the development and measurement of the skills involved. Classes also include strategies and concepts as they relate to those activities. Students are allowed a maximum of 4 semester credit hours in activity courses toward their degree. Kinesiology/Physical Education majors are allowed a maximum of 8 semester credit hours toward their degree. Each course number may be taken twice for credit.

The “Physical Fitness” course offerings are designed to develop a holistic approach to living. Specifically the courses cover the components of cardio-respiratory conditioning, muscular strength/endurance training, flexibility development, nutrition and weight control, and other related topics.

KINE 1100, 2100 Physical Fitness: Coed 1 Hour (0-3)
Participation in a variety of fitness activities for men and women.

KINE 1101, 2101 Physical Fitness: Women 1 Hour (0-3)
Participation in a variety of fitness activities designed specifically for women.

KINE 1102, 2102 Physical Fitness: Men 1 Hour (0-3)
Participation in a variety of fitness activities designed specifically for men.

KINE 1103, 2103 Physical Fitness: Circuit Weight Training 1 Hour (0-3)
Participation in resistance and cardio stations that alternate on a one minute timed interval.

KINE 1104, 2104 Physical Fitness: Walk/Jog 1 Hour (0-3)
Participation in cardio-respiratory conditioning through the development of walking, jogging techniques.

KINE 1105, 2105 Physical Fitness: Individualized Fitness 1 Hour (0-3)
Participation in an individually designed program. Enrollment only with departmental approval.

KINE 1106, 2106 Physical Fitness: Pilates 1 Hour (0-3)
Participation in a series of exercises designed to incorporate a mind/body relationship to strengthen the body’s core along with the entire body.

KINE 1107, 2107 Physical Fitness: Swimming 1 Hour (0-3)
Participation in cardio-respiratory development, and muscular toning and strengthening, through lap swimming. Basic swimming skills are required for enrollment.

KINE 1108, 2108 Physical Fitness: Step Aerobics 1 Hour (0-3)
Participation in cardio workouts that incorporate step patterns utilizing an aerobic step. Other equipment may also be utilized.

KINE 1109, 2109 Physical Fitness: Kick-boxing Aerobics 1 Hour (0-3)
Participation in cardio workouts that incorporate the use of martial art techniques performed to music.

KINE 1110, 2110 Physical Fitness: Water Aerobics 1 Hour (0-3)
Participation in cardio workouts that utilize a swimming pool and a variety of floatation equipment. Basic swimming skills are not required.

KINE 1113, 2113 Physical Fitness: Yoga 1 Hour (0-3)
Participation in a series of poses designed to incorporate a mind/body relationship to strengthen the entire body.

KINE 1117, 2117 Physical Fitness: Aikido 1 Hour (0-3)
Non-combative self defense.

KINE 1118, 2118 Physical Fitness: Tae Kwon Do 1 Hour (0-3)
Introduction to the basic techniques, applications, and philosophy of Tae Kwon Do.

KINE 1119, 2119 Physical Fitness: Judo 1 Hour (0-3)
The “gentle way” martial art widely used by police departments and women in the military. It utilizes grappling and throws.

KINE 1120, 2120 Physical Fitness: Self Defense 1 Hour (0-3)
The development of basic, realistic and practical self defense strategies.

KINE 1125, 2125 Basketball 1 Hour (0-3)

KINE 1109, 2109 Physical Fitness: Kick-boxing Aerobics 1 Hour (0-3)
Participation in cardio workouts that incorporate the use of martial art techniques performed to music.

KINE 1110, 2110 Physical Fitness: Water Aerobics 1 Hour (0-3)
Participation in cardio workouts that utilize a swimming pool and a variety of floatation equipment. Basic swimming skills are not required.

KINE 1113, 2113 Physical Fitness: Yoga 1 Hour (0-3)
Participation in a series of poses designed to incorporate a mind/body relationship to strengthen the entire body.

KINE 1117, 2117 Physical Fitness: Aikido 1 Hour (0-3)
Non-combative self defense.

KINE 1118, 2118 Physical Fitness: Tae Kwon Do 1 Hour (0-3)
Introduction to the basic techniques, applications, and philosophy of Tae Kwon Do.

KINE 1119, 2119 Physical Fitness: Judo 1 Hour (0-3)
The “gentle way” martial art widely used by police departments and women in the military. It utilizes grappling and throws.

KINE 1120, 2120 Physical Fitness: Self Defense 1 Hour (0-3)
The development of basic, realistic and practical self defense strategies.

KINE 1125, 2125 Basketball 1 Hour (0-3)
MATH 0372 Intermediate Algebra
3 Hours (3-0)
This course is intermediate in difficulty between the introductory and college algebra courses and is designed to bridge the gap between the courses. This course will enable students to become proficient in factoring, solving quadratic equations and systems of equations, working with conic sections, and functions Co-requisite: MATH 0170. Prerequisite: Requires a “C” or greater in MATH 0371 and a “P” in MATH 0170 or “P” in MATH 0174-0176 (FLEX Introductory Algebra sequence) or a satisfactory score on an algebra placement test or 230 on THEA. Course fee.

MATH 1314 College Algebra
3 Hours (3-0)
This course is designed to enable students to become proficient in the following algebraic topics: polynomials, rational expressions, exponents, radicals, linear equations and inequalities, quadratic equations, exponential and logarithmic equations, applications systems of equations, and binomial expansion. Prerequisite: Requires a “C” or greater in MATH 0392 and a “P” in MATH 0170 or a “P” in Math 0177-0179 or a satisfactory score on an algebra placement test or 270 on THEA. Course fee.

MATH 1316 Trigonometry
3 Hours (3-0)
This course is designed to enable students to become proficient in trigonometric and inverse trigonometric functions, the solution of triangles, identities, trigonometric equations, applications complex numbers, and logarithms. Prerequisite: Requires a “C” or greater in MATH 1314 or a satisfactory score on an algebra placement test. Course fee.

MATH 1324 Mathematics for Business & Social Sciences I
3 Hours (3-0)
This course is designed to enable students to solve elementary business problems involving the following topics: sets, linear relations and functions, elementary matrix theory, systems of linear equations and inequalities, linear programming by the simplex method, simple and compound interest, annuities, amortization, and bonds. Requires a “B” or greater in MATH 0391 and a “P” in Math 0190 or a satisfactory score on an algebra placement test. Course fee.

MATH 1325 Mathematics for Business & Social Sciences II
3 Hours (3-0)
This course is designed to enable students to learn quantitative methods for analyzing business problems. The topics to be studied are: Limits and continuity, derivatives, graphing and optimization, exponential and logarithmic functions, antiderivatives, integration, applications to management, economics, and business. Prerequisite: Requires a “C” or greater in MATH 1324. Course fee.

MATH 1342 Statistics
3 Hours (3-0)
This course is designed to enable students to learn the introductory techniques of collection, presentation, analysis, and interpretation of data. Correlation methods, analysis of variance, dispersion, sampling, quality control, reliability, mathematical models, and regression analysis are also studied. Students will become proficient in use of computer technology such as Excel. Prerequisite: Requires a “B” or greater in MATH 0391 and a “P” in MATH 0190 or a higher level math course or a satisfactory score on an Algebra placement test. Course fee.

MATH 1350 Fundamentals of Mathematics I
3 Hours (3-0)
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: Requires a “C” or greater in MATH 1314 or equivalent. Course fee.

MATH 1351 Fundamentals of Mathematics II
3 Hours (3-0)
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 grade (4-8) teacher certification. Prerequisite: Requires a “C” or greater in MATH 1350, or “C” or greater in MATH 1314 or equivalent. Course fee.

MATH 1414 College Algebra
4 Hours (4-0)
This course is designed to enable students to become proficient in the following algebraic topics: polynomials, rational expressions, exponents, radicals, linear equations and inequalities, quadratic equations, exponential and logarithmic equations, systems of equations, and binomial expansion. Prerequisite: Requires a “C” or greater in MATH 0391 and a “P” in MATH 0190 or a “P” in Math 0196-0199 or a satisfactory score on an algebra placement test or 270 on THEA. This course is designed for students needing more time to successfully complete College Algebra. Course fee.

MATH 2412 Pre-Calculus
4 Hours (4-0)
This course is designed to enable students to become proficient in applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. Some topics from analytical geometry are discussed. Prerequisite: Requires a “C” or greater in MATH 1314 or a satisfactory score on Trigonometry placement test. Course fee.

MATH 2413 Calculus I
4 Hours (4-0)
This course is designed to enable students to become proficient in introductory analytic geometry, the theory of limits, differential calculus of algebraic and trigonometric functions, applications of differentiation, antiderivatives, and the definite integral. Prerequisite: Requires a “C” or greater in MATH 1316 or a “C” or better in MATH 2412 or a satisfactory score on a precalculus placement test. Course fee.

MATH 2414 Calculus II
4 Hours (4-0)
This course is designed to enable students to become proficient in the differentiation and integration of transcendental functions, techniques of integration, and applications of the definite integral, indeterminate forms, and improper integrals. Prerequisite: Requires a “C” or greater in MATH 2413. Course fee.

MATH 2415 Calculus III
4 Hours (4-0)
This course will enable students to become proficient in indeterminate forms, improper integrals, sequences, series, vectors, and the differential and integral calculus of functions of several variables. Prerequisite: Requires a “C” or greater in MATH 2414. Course fee.
PHIL 1304 Introduction to World Religions
3 Hours (3-0)
Is a survey of the major belief systems in society today: Judaism, Christianity, Islam, Hinduism, and Buddhism, how they are different from ancient belief systems and how they are influencing new religious movements.

PHIL 1316 History of Christianity
3 Hours (3-0)
This course is an historical survey of the development of Christianity and its role in world history, from its origins to the present time covering theological and institutional issues. Course may be taken for either credit or non-credit. Also HIST 1316.

PHIL 2303 Introduction to Logic
3 Hours (3-0)
“Introduction to Logic” introduces the students to the nature and methods of correct reasoning; inductive and deductive reasoning; fallacies; argumentation.

PHIL 2306 Ethics
3 Hours (3-0)
This course covers the major classic philosophies of life with consideration of some of the value or “goodness” involved in the moral, religious, aesthetic, and scientific points of view.

PHIL 2321 Philosophy of Religion
3 Hours (3-0)
“Philosophy of Religion” is a study of the nature and philosophical implications of religious beliefs, experiences, and practices, and the relation of these to other major human concerns.

PHYS 1401 College Physics I
4 Hours (3-4)
This course will enable students to become familiar with classical mechanics, thermodynamics, and wave motion. This course is designed for students planning to study medicine, dentistry, veterinary medicine, optometry, biology, architecture, and the technical disciplines. A knowledge of algebra and elementary trigonometry is needed.

PHYS 1402 College Physics II
4 Hours (3-4)
This course will enable students to become proficient in classical electricity and magnetism, wave motion, and optics. Prerequisite: PHYS 1401.

PHYS 1403 Stars and Galaxies
4 Hours (3-3)
Study of stars, galaxies, and the universe outside our solar system. Non-majors.

PHYS 1404 Solar System
4 Hours (3-3)
Study of the sun and its solar system, including its origin. Non-majors.

PHYS 1415 Physical Science I
4 Hours (3-3)
This is a survey course in the physical sciences and scientific methods and is intended for non-science majors. The course introduces topics in physics, chemistry, geology, meteorology, and astronomy with an emphasis on physics topics. A lab is included, and basic mathematics is required.

PHYS 1417 Physical Science II
4 Hours (3-3)
This is a continuation of PHYS 1415 with an emphasis on topics in chemistry, geology, meteorology, and astronomy. A lab is included, and basic mathematics is required.

PHYS 2425 University Physics I
4 Hours (3-3)
This course will enable students of the physical sciences, engineering, and mathematics to become proficient in classical mechanics and thermodynamics. Prerequisite or Co-requisite: MATH 2413

PHYS 2426 University Physics II
4 Hours (3-3)
This course will enable students to become proficient in classical electricity and magnetism, wave motion, and optics. Prerequisite: PHYS 2425 or Co-requisite: MATH 2414

POFI 1204 Computer Fundamentals
2 Hours (2-1)
Computer applications specific to business-related software. Emphasizes the concurrent development of office skills and computer knowledge. Students will differentiate among systems, applications, and utility software; format, edit, and enhance a document; and manage files and folders.

POFI 1270 Field Reports and Data Transfer
2 Hours (2-0)
Essential computer application, writing, and computational skills required by the energy industry for completion of reports. The student will demonstrate computer applications, writing, and computational skills to produce reports used by the energy industry in various field-related activities.

POFI 2401 Word Processing
4 Hours (3-3)
Word processing software focusing on business applications. Students will produce documents using word processing applications. Prerequisite: POFI 1227 or instructor permission.

POFI 2431 Desktop Publishing for the Office
4 Hours (3-3)
In-depth coverage of desktop publishing terminology, text editing, and use of design principles to create publishing material using word processing desktop publishing features. Emphasis on layout techniques, graphics, and multiple page displays. The student will define desktop publishing terminology; manipulate text and graphics to create a balanced and focused layout; and create flyers, brochures, and multiple-page documents according to specified procedures. Prerequisite: ITSW 1401 or instructor permission.

POFI 2440 Advanced Word Processing
4 Hours (3-3)
Advanced techniques in merging, macros, graphics, and desktop publishing. Includes extensive formatting for technical documents. Emphasis on business applications. Students will implement advanced features; import data; and incorporate graphic, collaborative, and special functions to enhance documents. Prerequisite: ITSW 1401.

POFM 1302 Medical Software Applications
3 Hours (3-0)
Medical software applications for the management and operation of health care information systems. Students will utilize medical software applications; manage patient database; process billing; maintain schedules; and generate reports.
POFT 1227 Introduction to Keyboarding
2 Hours (2-0)
Skill development in keyboarding techniques. Emphasis on the development of acceptable speed and accuracy. Students will demonstrate basic keyboarding techniques, with acceptable accuracy and speed of at least 30 words per minute.

POFT 1301 Business English
3 Hours (3-0)
Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business. 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. Does not count toward major in “Psychology.”

POFT 1309 Administrative Office Procedure I
3 Hours (3-0)
Study of current office procedures, duties, and responsibilities applicable to an office environment. Students will develop time management techniques; demonstrate communication skills; and identify the basic skills of an office professional.

POFT 1325 Business Mathematics and Machine Applications
3 Hours (3-1)
Business math problem-solving skills using office technology. Students will solve business application problems using office technology.

POFT 2312 Business Correspondence and Communications
3 Hours (3-0)
Development of writing and presentation skills to produce effective business communications. Students will compose, produce, and present effective business documents appropriate to meet industry standards; apply critical evaluation techniques to business documents and demonstrate the importance of coherent, ethical, communication principles in business and industry. Prerequisite: POFT 1301 or instructor permission.

POFT 2333 Advanced Document Formatting and Skill Building
3 Hours (2-4)
A continuation of keyboarding skills in advanced document formatting emphasizing speed, accuracy, and decision-making. Students will demonstrate proficient keyboarding techniques; apply mailability standards to business documents using word processing software; and implement decision-making skills. Prerequisites: POFT 1227 and POFT 2401.

POFT 2380 Cooperative Education-Administrative/Secretarial, General Science
3 Hours (1-0-20)
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 work experience. This course may be repeated if topics and learning outcomes vary. As outlined in the learning plan, the student will master the theory, concepts, and skills involving the tools, materials, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, and legal systems associated with the particular occupation and the business/industry; demonstrate ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable technical language of the occupation and the business or industry. Prerequisite: Two Business Applications courses or instructor permission.

POFT 2401 Document Formatting and Skill Building
4 Hours (3-3)
A continuation of keyboarding skills emphasizing acceptable speed, and accuracy levels and formatting documents. Students will demonstrate proficient keyboarding techniques; and apply mailability standards to business documents using word processing software. Prerequisites: POFT 1227 and ITSW 1401 or instructor permission.

POFT 2431 Administrative Systems
4 Hours (3-3)
Advanced concepts of project management and office procedures integrating software applications. Students will select materials, procedures, and equipment; and manage business projects using technology, critical thinking, and problem-solving skills. Prerequisites: ITSW 1401, ITSW 1404, ITSW 1407 and ITSW 1410.

PSYC 1200 Student Success Seminar
2 Hours (2-1)
Addresses the knowledge necessary for college success; develops the skills necessary to study and learn; and develops competence in finding information and resources. Theoretical models of strategic learning, cognition, and motivation serve as the conceptual bases for this introduction to college-level student academic strategies. Students develop educational plans and use assessment instruments (e.g., learning inventories) to help them identify their own strengths and weaknesses as strategic learners. (Cross-listed as EDUC 1200)

PSYC 2301 Introduction to Psychology
3 Hours (3-0)
“Introduction to Psychology” deals with the scientific study of the behavior of individuals and their mental processes. The focus is on the perceptions, thoughts, emotions, and social interactions of people in their everyday lives. Psychological theories of mental health, mental disorders, and therapy will be addressed.

PSYC 2302 Applied Psychology
3 Hours (3-0)
This course is the application of psychological principles and methods to the development of the cognitive and social skills of students in the collegiate setting. Does not count toward major in Psychology.

PSYC 2306 Human Sexuality
3 Hours (3-0)
“Human Sexuality” provides a comprehensive introduction to the biological, psychological, behavioral, and cultural aspects of sexuality. Contemporary research addressing such issues as communication, love, relationships, sexual problems, therapies, pregnancy, and childbirth is discussed. Also SOCI 2306.

Students may receive credit for only two of PSYC 2308, PSYC 2311 and PSYC 2314.

PSYC 2308 Child Psychology
3 Hours (3-0)
This course covers the first part of the human development process. It focuses on psychological, cognitive, social, and environmental factors that shape human behavior from prenatal development through adolescence. Prerequisite: PSYC 2301 or permission of instructor.
**SPAN 2321 Introduction to Spanish Literature**  
3 Hours (3-0)  
This course is designed for those students who wish to acquire a basic background in Spanish and Latin American literature and culture. The course includes the reading of cultural essays, short stories, and poetry, which are a basis for class discussion and composition. Practice in speaking, reading, and writing provide for vocabulary expansion. Conducted in Spanish. Prerequisite: SPAN 2312.

**SPAN 2324 Hispanic Literature**  
3 Hours (3-0)  
A course designed to enable students through reading, discussion and writing to explore the fiction, drama, and poetry of Hispanic authors who write in English or who have been translated into English.

**SPCH 1144, 1145, 2144, 2145 Speech Communication**  
1 Hour (0-3)  
A course designed to enable students to participate in speech communication activities and research.

**SPCH 1311 Introduction to Speech Communication**  
3 Hours (3-0)  
A course designed to enable students to practice speech communication in interpersonal, small group, and public communication situations and to apply the concepts of communication theory.

**SPCH 1315 Public Speaking**  
3 Hours (3-0)  
A course designed to enable students to research, compose, organize, and deliver speeches for various purposes and occasions with emphasis on listener analysis and informative and persuasive techniques.

**SPCH 1318 Interpersonal Communication**  
3 Hours (3-0)  
A course designed to enable students to analyze and practice person-to-person communication with focus on the development, maintenance, and termination of relationships. Oral presentations and listening skills are emphasized and developed.

**SPCH 1321 Business and Professional Speaking**  
3 Hours (3-0)  
A course designed to enable students to apply the skills of speech communication as they relate to business and professional situations. Practice in public presentations, organizational and small group settings, interviewing, and leadership techniques are emphasized.

**SPCH 1342 Voice and Diction**  
3 Hours (3-0)  
A course designed to enable students to study the physiology and mechanics of effective voice production with practice in articulation, pronunciation, enunciation, and practical use of the International Phonetic Alphabet. Recommended for students studying English as a Second Language.

**SPCH 2289 Academic Cooperative**  
2 Hours (2-2)  
An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of speech communication.

**SPCH 2301 Introduction to Technology and Human Communication**  
3 Hours (3-0)  
A survey of emerging interactive communication technologies and their influence on human communication, including interpersonal, group decision-making, and public and private communication contexts.

**SPCH 2316 Interviewing**  
3 Hours (3-0)  
A course designed to enable the student to apply communication concepts in selected interview settings with emphasis on dyadic communication, questioning techniques, interview structure, and persuasion.

**SPCH 2333 Discussion and Small Group Communication**  
3 Hours (3-0)  
A course designed to enable students to apply discussion and small group theories and techniques as they relate to group processes and interaction.

**SPCH 2335 Argumentation and Debate**  
3 Hours (3-0)  
A course designed to enable students to study the principles of argumentation and debate. Practice in briefing, evidence, and refutation.

**SPCH 2341 Oral Interpretation**  
3 Hours (3-0)  
A course designed to enable students to practice techniques of analyzing and interpreting literature through preparation and presentation of various literary forms.

**SPCH 2389 Academic Cooperative**  
3 Hours (3-3)  
An instructional program designed to integrate on-campus study with practical hands-on work experience. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of speech communication.

**SSP 0170 Student Success**  
1 Hour (1-1)  
This course is designed to introduce specific strategies that will assist a college student to prepare for college classes, determine educational goals, and identify personal strengths in learning and career interests. Each student will confer with an academic mentor to help the student connect to the college community and support their endeavor to be successful in college.

**SSP 0270 Student Success: Health Care Studies**  
2 Hours (2-0)  
For all students planning to enter the health care profession, this course is designed to introduce specific strategies that will assist college students in preparing for college classes, to determine their educational goals, and to identify their personal strengths in learning and career interests. Students will confer with an academic mentor who will help them connect to the college community and support their endeavor to be successful in college. In addition, this course is an overview of the roles of the various members of the health care system, educational requirements, and issues affecting the delivery of health care.

**TECA 1303 Families, School and Community**  
3 Hours (3-0-0)  
This course is 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. The course includes 15 hours of field experience.
TECA 1311 Educating Young Children
3 Hours (3-0-0)
This course is 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. The course includes 15 hours of field experience.

TECA 1318 Wellness of the Young Child
3 Hours (3-0-0)
This course is a study of the factors that impact the well-being of the young child including healthy behavior, food, nutrition, fitness and safety practices. The focus is on local and national standards and legal implications of relevant policies and regulations. The course includes 15 hours of field experience.

TECA 1354 Child Growth and Development
3 Hours (3-0-0)
This course is a study of the physical, emotional, social, and cognitive factors impacting growth and development of children through adolescence. The course includes 15 hours of field experience.

TECM 1301 Industrial Mathematics
3 hours (3-0)
Math skills applicable to industrial occupations. Includes fraction and decimal manipulation, measurement, percentage, and problem solving techniques for equations and ratio/proportion applications. Students will convert between decimals and fractions; use measuring tools; calculate ratios and proportions in a technical application; transpose linear equations to solve for unknowns.

TMGT 3302 Business and Economic Statistics
3 Hours (3-0)
An introduction to descriptive statistics and statistical inference for technical managers. Topics include sampling techniques, estimation, hypothesis testing, and simple regression.

TMGT 3303 Managerial Communications
3 Hours (3-0)
A study of the skills necessary to communicate effectively in the workplace. Topics include selection of the proper channel and medium for information delivery, team building, business etiquette, and professionalism. Students will analyze and prepare correspondence, proposals, and reports. Students are required to deliver industry-related oral presentations of each student’s choosing.

TMGT 3305 Organizational Theory and Practice
3 Hours (3-0)
A comprehensive analysis of individual and group behavior in organizations. Its purpose is to provide an understanding of how organizations can be managed more effectively and at the same time enhance the quality of employee work life. Topics include motivation, goal setting and rewards, job design, group dynamics, work stress, power and politics, international aspects of organizations, organizational structure, communication and organizational change and development.

TMGT 3309 Marketing for Managers
3 Hours (3-0)
This course addresses the overview of marketing mix, functions, processes, and impact predictions and assessments. The course includes identification of consumer and organizational needs and the relationship of environmental issues. Students will identify the marketing mix components in relation to market segmentation; explain the environmental factors that influence consumer and organizational decision-making processes; complete a marketing plan; and use assessment methodology to predict impact on organizational performance.

TMGT 3310 Decision Making
3 Hours (3-0)
Analytic and systematic approach to the study of decision making through management science processes and techniques. Topics include quantitative analysis and decision-making relationships, simulation and risk analysis, and decision analysis using various criteria.

TMGT 3311 Human Resources Management
3 Hours (3-0)
This course examines the major trends in human resources management, including problems and issues faced by organizations and individuals in times of change. Responsibilities of the human resources department and the roles that every manager plays, both as a supervisor and as a client of the human resources department, are studied. Topics include human resources forecasting and planning, job design, employee selection, equal employment opportunity laws and judicial rulings, performance appraisal, compensation and benefits, career development, and labor relations.

TMGT 3336 Legal Issues for Managers
3 Hours (3-0)
This course explores the State and federal laws that affect management behavior and organizational practices including contracts, business organizations, employment law, products liability, safety issues, and environmental regulations. Pre-requisite: BUSI 2301 or Instructor Permission

TMGT 3337 Economics for Managers
3 Hours (3-0)
A study of economics and its role in managerial decision making. The course is focused on modern economic thinking and its relevance to business and management. Topics include market structure, production and cost, and public policy towards business. Prerequisite: ECON 2301, ECON 2302 or instructor permission.

TMGT 3338 Accounting for Managers
3 Hours (3-0)
The use of accounting information by non-financial managers. Emphasis is placed on the interpretation, rather than the construction, of accounting information. The course will examine the technical managerial skills required to sustain and enhance the organizations performance through the accounting and finance processes of reporting, compliance, research, analysis, interpretation and application. Topics such as activity-based costing, cost accounting, break-even and decision analysis, and budgeting and control are covered. Prerequisite: ACCT 2401, ACNT 1403 or instructor permission.

TMGT 3347 Ethics and Corporate Social Responsibility
3 Hours (3-0)
This course will examine the role of ethics and social responsibility in the management of public and private sector organizations. An emphasis will be on contemporary trends in corporate responsibilities with respect to ethical, legal, economic and regulatory conditions in the global marketplace.

TMGT 3352 Entrepreneurship
3 Hours (3-0)
This course presents a comprehensive study of the various factors of production in meeting the needs of consumers in creative and profitable ways. Topics include market segment research, starting a new enterprise, forming an entrepreneurial team, venture capital sources, and formulation of a business plan.
All degrees with the exception of the AAS require students to complete the Core Curriculum. The Core Curriculum was established by the Texas legislature and the Texas Higher Education Coordinating Board to facilitate the transfer of courses between state supported institutions of higher education in Texas and to provide students with the basis of a liberal education. In order to obtain most degrees from a state supported institution in Texas, a student must complete the Core Curriculum. Thus, once a student has completed the Core Curriculum at one institution, it has been completed at all state supported institutions. Courses are chosen from the following areas. Consult degree programs for specific requirements. The required number of semester credit hours is noted in parenthesis beside each area.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Area</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>010</td>
<td>Communications (9)</td>
<td>ENGL 1301 and 1302, one course chosen from SPCH 1311, 1315, 1318, or 1321</td>
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<tr>
<td>020</td>
<td>Mathematics (3)</td>
<td>MATH 1314, MATH 1316, MATH 1324, MATH 1342, MATH 1414, MATH 2412, MATH 2413, MATH 2414, MATH 2415</td>
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<tr>
<td>030</td>
<td>Natural Sciences (8)</td>
<td>BIOL 1406, BIOL 1407, BIOL 1408, BIOL 1409, BIOL 1424, BIOL 2401, BIOL 2402, BIOL 2421, CHEM 1405, CHEM 1411, CHEM 1412, GEOL 1401, GEOL 1403, GEOL 1404, GEOL 1405, GEOL 1447, PHYS 1401, PHYS 1402, PHYS 1403, PHYS 1404, PHYS 1415, PHYS 1417, PHYS 2425, PHYS 2426</td>
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<tr>
<td>040</td>
<td>Humanities (3)</td>
<td>ENGL 2321, ENGL 2322, ENGL 2323, ENGL 2326, ENGL 2327, ENGL 2328, ENGL 2331, ENGL 2332, ENGL 2333, ENGL 2342, ENGL 2343, FREN 2311, FREN 2312, GERM 2311, GERM 2312, HUMA 1301, HUMA 1302, LATI 2311, LATI 2312, PHIL 1301, PHIL 2303, PHIL 2306, SPAN 2311, SPAN 2312</td>
</tr>
<tr>
<td>050</td>
<td>Visual and Performing Arts (3)</td>
<td>ARTS 1301, ARTS 1303, ARTS 1304, DRAM 1310, DRAM 2361, DRAM 2362, DRAM 2366, MUSI 1306, MUSI 1308, MUSI 1309, MUSI 1310</td>
</tr>
</tbody>
</table>
Government/Political Science (6): GOVT 2301, GOVT 2302  
Other Social/Behavioral Sciences (3): ANTH 2302, ANTH 2351, COMM 2300, ECON 2301, ECON 2302, GEOG 1303, HIST 2311, HIST 2312, PSYC 2301, SOCI 1301, SOCI 1306 |
| 090         | Fitness and Wellness (1)      | KINE 1100, KINE 1101, KINE 1102, KINE 1103, KINE 1104, KINE 1105, KINE 1106, KINE 1107, KINE 1108, KINE 1109, KINE 1110, KINE 1113, KINE 1117, KINE 1118, KINE 1119, KINE 1120, KINE 1125, KINE 1126 |

Total: 42 semester credit hours