COURSE DESCRIPTIONS

General Information

Each course description identifies a course, the weekly lecture time and lab time in hours, and prerequisites to the course. Academic transfer courses will be indicated by ACGM. All courses that count toward an Associate of Arts, Associate of Arts in Teaching or Associate of Science degree at College of the Mainland must be ACGM courses. Workforce Education courses will be indicated by WECM. Bachelor of Science in Nursing courses will be indicated by UDCM.

If students enroll for a course and do not have the appropriate prerequisites, they will be withdrawn.

The numbing system for each course is described as follows: Using ACNT 1303 as an example the first number (1) shows it is a freshman course (a 2 would indicate it is a sophomore course). The second number (3) shows three credits are earned upon successful completion. The last two numbers are used for administrative purposes only.

Prerequisite Information

Students must earn a grade of "C" or better in all prerequisite courses to satisfy the prerequisite requirement.

Course Inventory

ACCT 2301. PRINCIPLES OF FINANCIAL ACCOUNTING
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
This course is an introduction to the fundamental concepts of financial accounting as prescribed by U.S. generally accepted accounting principles (GAAP) as applied to transactions and events that affect business organizations. Students will examine the procedures and systems to accumulate, analyze, measure, and record financial transactions. Students will use recorded financial information to prepare a balance sheet, income statement, statement of cash flows, and statement of shareholders' equity to communicate the business entity's results of operations and financial position to users of financial information who are external to the company. Students will study the nature of assets, liabilities, and owners' equity while learning to use reported financial information for purposes of making decisions about the company. Students will be exposed to International Financial Reporting Standards (IFRS). Recommended co-requisite: MATH 1324 Mathematics for Business & Social Science.

ACCT 2302. PRINCIPLES OF MANAGERIAL ACCOUNTING
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
This course is an introduction to the fundamental concepts of managerial accounting appropriate for all organizations. Students will study information from the entity's accounting system relevant to decisions made by internal managers, as distinguished from information relevant to users who are external to the company. The emphasis is on the identification and assignment of product costs, operational budgeting and planning, cost control, and management decision making. Topics include product costing methodologies, cost behavior, operational and capital budgeting, and performance evaluation. Prerequisite: ACCT 2301 Principles of Financial Accounting with a grade of "C" or better.

ACNT 1303. INTRODUCTION TO ACCOUNTING I
(LECTURE 3, LAB 0). CREDIT 3. WECM.
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 payrolls.

ACNT 1313. COMPUTERIZED ACCOUNTING APPLICATIONS
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Use of the computer to develop and maintain accounting records and to process common business applications for managerial decision-making. Prerequisite: ACNT 1303 or ACCT 2301 with a grade of "C" or better. Offered spring only.

ACNT 1331. FEDERAL INCOME TAX: INDIVIDUAL
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Basic instruction in the tax laws as currently implemented by the Internal Revenue Service providing a working knowledge of preparing taxes for the individual. Offered fall only.

ACNT 2302. ACCOUNTING CAPSTONE
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Allows students to apply broad knowledge of the accounting profession through discipline specific projects involving the integration of individuals and teams performing activities to simulate workplace situations. Students will complete the accounting cycle for service and merchandising businesses; demonstrate computer skills related to accounting applications in business; prepare financial reports; communicate report findings in written and/or oral form; solve complex accounting issues; and participate in research and discussion on accounting issues, trends, and/or situations. Prerequisites: ACCT 2301 and ACCT 2302 with a grade of "C" or better. Offered spring only.

ARTC 1302. DIGITAL IMAGING I
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Digital imaging using raster image editing and/or image creation software: scanning, resolution, file formats, output devices, color systems, and image-acquisitions.

ARTC 1313. DIGITAL PUBLISHING I
(LECTURE 2, LAB 4). CREDIT 3. WECM.
The fundamentals of using digital layout as a primary publishing tool and the basic concepts and terminology associated with typography and page layout.

ARTC 1327. TYPOGRAPHY
(LECTURE 2, LAB 4). CREDIT 3. WECM.
A study of letterforms and typographic concepts as elements of graphic communication. Emphasis on developing a current, practical typographic knowledge based on industry standards. Prerequisite: ARTC 1313 or ARTC 2347 with a grade of "C" or better. Offered fall only.

ARTC 1349. ART DIRECTION I
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Creation of projects in art direction for advertising graphic campaigns for products, services, or ideas. Topics include all campaign procedures from initial research and creative strategy to final execution and presentation of a comprehensive project. Prerequisite: ARTC 1353 with a grade of "C" or better. Offered summer only.

ARTC 1353. COMPUTER ILLUSTRATION
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Use of the tools and transformation options of an industry-standard vector drawing program to create complex illustrations or drawings. Offered spring only.

ARTC 2313. DIGITAL PUBLISHING II
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Includes layout procedures from thumbnails and roughs to final comprehensive and print output. Emphasis on design principles for the creation of advertising and publishing materials, and techniques for efficient planning and documenting projects. Prerequisites: ARTC 1313 and ARTC 1302 with a grade of "C" or better.

ARTC 2335. PORTFOLIO DEVELOPMENT FOR GRAPHIC DESIGN
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Preparation of a portfolio comprised of completed graphic design projects. Evaluation and demonstration of portfolio presentation methods based on the student's specific area of study. Prerequisites: ARTC 2313, IMED 2315 or GRPH 2309 with a grade of "C" or better. Offered spring only.

ARTC 2388. INTERNSHIP - COMMERCIAL AND ADVERTISING ART
(LECTURE 0, INTR 18). CREDIT 3. WECM.
A work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer. Prerequisites: Instructor Approval.

ARTS 1301. ART APPRECIATION
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A general introduction to the visual arts designed to create an appreciation of the vocabulary, media, techniques, and purposes of the creative process. Students will critically interpret and evaluate works of art within formal, cultural, and historical contexts. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

ARTS 1303. ART HISTORY I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
(Prehistoric to the 14th century) A chronological analysis of the historical and cultural contexts of the visual arts from prehistoric times to the 14th century. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

ARTS 1304. ART HISTORY II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
(14th century to the present) A chronological analysis of the historical and cultural contexts of the visual arts from the 14th century to the present day. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

ARTS 1311. DESIGN I
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
An introduction to the fundamental terminology, concepts, theory, and application of two-dimensional design.

ARTS 1312. DESIGN II
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
An introduction to the fundamental terminology, concepts, theory and application of three-dimensional design.

ARTS 1313. FOUNDATIONS OF ART
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Introduction to the creative media designed to enhance artistic awareness and sensitivity through the creative and imaginative use of art materials and tools. Includes art history and culture through the exploration of a variety of art works with an emphasis on aesthetic judgment and growth.

ARTS 1316. DRAWING I
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
A foundation studio course exploring drawing with emphasis on descriptive, expressive and conceptual approaches. Students will learn to see and interpret a variety of subjects while using diverse materials and techniques. Course work will facilitate a dialogue in which students will engage in critical analysis and begin to develop their understanding of drawing as a discipline.

ARTS 1317. DRAWING II
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
A studio course exploring drawing with continued emphasis on descriptive, expressive and conceptual approaches. Students will further develop the ability to see and interpret a variety of subjects while using diverse materials and techniques. Course work will facilitate a dialogue in which students will employ critical analysis to broaden their understanding of drawing as a discipline. Prerequisite: ARTS 1316 with a grade of C or better.

ARTS 2311. DESIGN III
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Studio art course that is a theoretical and practical study of color and composition in art and design. The course consists of studio-based projects using the formal and conceptual aspects of color. The course also examines the functions of color in art from different historical and cultural perspectives.

ARTS 2313. GRAPHIC DESIGN
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
A studio course that introduces basic objectives, principles, and methods used in graphic design. The course focuses on creativity, aesthetic judgment, and critical-thinking skills to expand conceptual solutions within the realm of contemporary graphic design.

ARTS 2316. PAINTING I
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Studio art course that introduces the fundamental principles, materials, and techniques of painting. ARTS 1311 and ARTS 1316 are recommended as prerequisites but are not required.

ARTS 2317. PAINTING II
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Studio art course that furthers the study of the principles, materials, and techniques of painting. Prerequisite: ARTS 1316 with a grade of "C" or better.

ARTS 2323. LIFE DRAWING
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Basic study of the human form. Studio art course that introduces the analytic study of the human form and the figure's potential for compositional and expressive use in drawing.

ARTS 2326. SCULPTURE I
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
A studio art course that introduces the materials, processes, and issues pertaining to the making of three-dimensional objects and environments. The course explores the use of varied materials and techniques along with the formal and conceptual principles that form the basis of contemporary sculpture.

ARTS 2346. CERAMICS I
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
A studio art course that introduces basic building, throwing, and other techniques as it relates to the design and production of ceramic sculpture and pottery.

ARTS 2347. CERAMICS II
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
A studio art course that furthers the study of building, throwing, and other techniques as it relates to the design and production of ceramic sculpture and pottery. Prerequisite: ARTS 2346 with a grade of "C" or better.

ARTS 2348. DIGITAL MEDIA
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Studio art course that introduces the potential of basic digital media manipulation and graphic creation. The course emphasizes still and time-based media.

ARTS 2356. PHOTOGRAPHY I
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
A studio art course that introduces the technical and conceptual basics of photography as a creative medium.

ARTS 2357. PHOTOGRAPHY II
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
A studio art course that furthers the study of the technical and conceptual basics of photography as a creative medium. Prerequisite: ARTS 2356 with a grade of "C" or better.

ARTV 1351. DIGITAL VIDEO
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Producing and editing video and sound for multimedia or web productions. Emphasizes capture, editing, and outputting of video using a digital video workstation. Offered fall only.

ARTV 2341. ADVANCED DIGITAL VIDEO
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Advanced digital video techniques for post-production. Emphasizes integration of special effects and animation for film, video, and the Internet. Exploration of new and emerging compression and video streaming technologies. Prerequisite: ARTV 1351 with a grade of "C" or better. Offered spring only.

ASTR 1403. STARS AND GALAXIES
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Study of stars, galaxies, and the universe outside our solar system. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

ASTR 1404. SOLAR SYSTEM
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Study of the sun and its solar system, including its origin. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

BARB 1402. BARBER STYLING I
(LECTURE 2, LAB 7). CREDIT 4. WECM.
Continued development in haircutting techniques and implementation of basic styling. Introduction to chemical reformation.

BARB 1404. INTRODUCTION TO BARBER STYLING
(LECTURE 2, LAB 8). CREDIT 4. WECM.
Basic techniques for hair cutting. Introduction to the related skills of shampooing and treatments, and of trimming beards and mustaches.

BARB 1442. BARBER STYLING II
(LECTURE 2, LAB 7). CREDIT 4. WECM.
Continuation of Barber Styling I with emphasis on intermediate hands-on application of skills.

BARB 2431. ADVANCED BARBER STYLING I
(LECTURE 2, LAB 7). CREDIT 4. WECM.
Advanced skills in all areas of haircutting, hairstyling and skincare. Introduction to haircoloring techniques.

BARB 2432. BARBER LAW AND SHOP MANAGEMENT I
(LECTURE 2, LAB 7). CREDIT 4. WECM.
Introduction to Texas barber law and business management.

BARB 2441. ADVANCED BARBER STYLING II
(LECTURE 2, LAB 8). CREDIT 4. WECM.
Continuation of Advanced Barber Styling I with further refinement of all skills and theory for licensure.

BARB 2444. BARBER LAW AND SHOP MANAGEMENT II
(LECTURE 2, LAB 8). CREDIT 4. WECM.
Continuation of Barber Law and Shop Management I. Includes advanced business management and preparation for the State Board Examination for a barber license.

BCIS 1305. BUSINESS COMPUTER APPLICATIONS
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
Introduces and develops foundational skills in applying essential and emerging business productivity information technology tools. The focus of this course is on business productivity software applications, including word processing, spreadsheets, databases, presentation graphics, data analytics, and business-oriented utilization of the internet.

BIOL 1322. NUTRITION AND DIET THERAPY
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course introduces general nutritional concepts in health and disease and includes practical applications of that knowledge. Special emphasis is given to nutrients and nutritional processes including functions, food sources, digestion, absorption, and metabolism. Food safety, availability, and nutritional information including food labels, advertising, and nationally established guidelines are addressed. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. This course is also offered as a distance learning course.

BIOL 1406. BIOLOGY FOR SCIENCE MAJORS I
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Fundamental principles of living organisms will be studied, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Concepts of cytology, reproduction, genetics, and scientific reasoning are included. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. Successful completion of College Algebra or a higher-level mathematics is recommended.

BIOL 1407. BIOLOGY FOR SCIENCE MAJORS II
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of 'C' or better. Prerequisite: BIOL 1406 with a grade of "C" or better. Successful completion College Algebra or higher-level mathematics, with a grade of "C" or better, is recommended.

BIOL 1408. BIOLOGY FOR NON-SCIENCE MAJORS I
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
A survey of biological principles with an emphasis on humans, including chemistry of life, cells, structure, function, and reproduction. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

BIOL 1409. BIOLOGY FOR NON-SCIENCE MAJORS II
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
A survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. Successful completion of BIOL 1408 with a grade of "C" or better is recommended.

BIOL 2401. ANATOMY & PHYSIOLOGY I
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body including cells, tissues, and organs of the following systems: integumentary, skeletal, muscular, nervous, and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. BIOL 1408 with a grade "C" or better is strongly recommended as a prerequisite, but is not required.

BIOL 2402. ANATOMY & PHYSIOLOGY II
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Anatomy and Physiology II is the second part of a two-course sequence. It is a study of the structure and function of the human body including the following systems: endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics). Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. BIOL 2401 with a grade of "C" or better.

BIOL 2420. MICROBIOLOGY FOR NON-SCIENCE MAJORS
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
This course covers basic microbiology and immunology and is primarily directed at pre-nursing, pre-allied health, and non-science majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health. Prerequisites: Two lab-based courses (eight credit hours) selected from biology or chemistry core curriculum courses with a grade of "C" or better.

BMGT 1309. INFORMATION AND PROJECT MANAGEMENT
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Critical path methods for planning and controlling projects. Includes time/cost tradeoffs, resource utilization, stochastic considerations, task determination, time management, scheduling management, status reports, budget management, customer service, professional attitude, and project supervision. Offered fall only.

BMGT 1313. PRINCIPLES OF PURCHASING
(LECTURE 3, LAB 0). CREDIT 3. WECM.
The purchasing process as it relates to such topics as inventory control, price determination, vendor selection, negotiation techniques, and ethical issues. Offered fall only.

BMGT 1327. PRINCIPLES OF MANAGEMENT
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Concepts, terminology, principles, theories, and issues in the field of management. Offered spring only.

BMGT 2303. PROBLEM SOLVING AND DECISION MAKING
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Decision-making and problem-solving processes in organizations utilizing logical and creative problem solving techniques. Application of theory is provided by experiential activities using managerial decision tools. Offered spring only.

BMGT 2309. LEADERSHIP
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate and identify leadership styles. Offered fall only.

BMGT 2341. STRATEGIC MANAGEMENT
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Strategic management process, including analysis of how organizations develop and implement a strategy for achieving organizational objectives in a changing environment. Offered spring only.

BUSG 1315. SMALL BUSINESS OPERATIONS
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Aspects of operating a small business. Emphasizes management functions including how managers plan, exercise leadership, organize, and control the operations. Offered fall only.

BUSG 1341. SMALL BUSINESS FINANCING
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Financial structure of a small business. Includes business financing, budgeting, record keeping, taxation, insurance, and banking. Offered fall only.

BUSG 2309. SMALL BUSINESS MANAGEMENT/ENTREPRENEURSHIP
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Starting, operating, and growing a small business. Includes essential management skills, how to prepare a business plan, accounting, financial needs, staffing, marketing strategies, and legal issues. Offered spring only.

BUSI 1301. BUSINESS PRINCIPLES
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course provides a survey of economic systems, forms of business ownership, and considerations for running a business. Students will learn various aspects of business, management, and leadership functions; organizational considerations; and decision-making processes. Financial topics are introduced, including accounting, money and banking, and securities markets. Also included are discussions of business challenges in the legal and regulatory environment, business ethics, social responsibility, and international business. Emphasized is the dynamic role of business in everyday life.

BUSI 2301. BUSINESS LAW
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
The course provides the student with foundational information about the U.S. legal system and dispute resolution, and their impact on business. The major content areas will include general principles of law, the relationship of business and the U.S. Constitution, state and federal legal systems, the relationship between law and ethics, contracts, sales, torts, agency law, intellectual property, and business law in the global context. Prerequisite: High school coursework in U.S. history and government, or equivalent.

BUSI 2304. BUSINESS REPORT WRITING AND CORRESPONDENCE
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Theory and applications for technical reports and correspondence in business.

BUSI 2305. BUSINESS STATISTICS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Descriptive and inferential statistical techniques for business and economic decision-making. Topics include the collection, description, analysis, and summarization of data; probability; discrete and continuous random variables; the binomial and normal distributions; sampling distributions; tests of hypotheses; estimation and confidence intervals; linear regression; and correlation analysis. Statistical software is used to analyze data throughout the course. Prerequisite: MATH 1324 or MATH 1314 and BCIS 1305.

CHEF 1205. SANITATION AND SAFETY
(LECTURE 2, LAB 0). CREDIT 2. WECM.
A study of personal cleanliness; sanitary practices in food preparation; causes, investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards.

CHEF 1301. BASIC FOOD PREPARATION
(LECTURE 2, LAB 3). CREDIT 3. WECM.
A study of the fundamental principles of food preparation and cookery to include Brigade System, cooking techniques, material handling, heat transfer, sanitation, safety, nutrition, and professionalism.

CHEF 1302. PRINCIPLES OF HEALTHY CUISINE
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Introduction to the principles of planning, preparation, and presentation of nutritionally balanced meals. Alternative methods and ingredients will be used to achieve a healthier cooking style. Prerequisites: PSTR 2331, CHEF 1341, CHEF 1345, CHEF 1314 with a grade of "C" or better.

CHEF 1310. GARDE MANGER
(LECTURE 2, LAB 3). CREDIT 3. WECM.
A study of cold foods and garnishes. Emphasis on design, techniques, and display of fine foods. Prerequisites: CHEF 1205, CHEF 1301, CHEF 2301 and PSTR 1301 with a grade of "C" or better.

CHEF 1314. A LA CARTE COOKING
(LECTURE 2, LAB 4). CREDIT 3. WECM.
A course in a la carte or "cooking to order" concepts. Topics include menu and recipe interpretation and conversion, organization of work station, employment of appropriate cooking methods, plating, and saucing principles.

CHEF 1341. AMERICAN REGIONAL CUISINE
(LECTURE 2, LAB 4). CREDIT 3. WECM.
A study of the development of regional cuisines in the United States with emphasis on the similarities in production and service systems. Application of skills to develop, organize, and acquire knowledge of recipe strategies and production systems.

CHEF 1345. INTERNATIONAL CUISINE
(LECTURE 2, LAB 4). CREDIT 3. WECM.
The study of classical cooking skills associated with the preparation and service of international and ethnic cuisines. Topics include similarities between food production systems used in the United States and other regions of the world.

CHEF 2301. INTERMEDIATE FOOD PREPARATION
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Continuation of previous food preparation course. Topics include the concept of pre-cooked food items, as well as scratch preparation. Covers full range of food preparation techniques. Prerequisites: CHEF 1205 and CHEF 1301 with a grade of "C" or better.

CHEF 2364. PRACTICUM (OR FIELD EXPERIENCE) - CULINARY ARTS/ CHEF TRAINING
(LECTURE 0, PRAC 21). CREDIT 3. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisites: IFWA 1318, CHEF 1310, RSTO 1313 and RSTO 1304 with a grade of "C" or better.

CHEM 1405. INTRODUCTORY CHEMISTRY I (PROCESS TECH) / OCCUPATIONAL SAFETY)(030)
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, crude oil chemistry, and environmental/ consumer chemistry. Emphasis on topics related to Process technology. Prerequisite: MATH 1314 with a grade "C" or better. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

CHEM 1406. INTRODUCTORY CHEMISTRY I
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/ physiological chemistry, and environmental/ consumer chemistry. Designed for allied health students and for students who are not science majors. Prerequisite: Math 950+ or Diagnostic Level 6 or MATH 0306, MATH 0308, MATH 0315 or MATH 0320 with a grade of "C" or better. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

CHEM 1411. GENERAL CHEMISTRY I
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Fundamental principles of chemistry for majors in the sciences, health sciences, and engineering; topics include measurements, fundamental properties of matter, states of matter, chemical reactions, chemical stoichiometry, periodicity of elemental properties, atomic structure, chemical bonding, molecular structure, solutions, properties of gases, and an introduction to thermodynamics and descriptive chemistry. Basic laboratory experiments supporting theoretical principles previously listed; introduction of the scientific method, experimental design, data collection and analysis, and preparation of laboratory reports. Prerequisite: MATH 1314 with a grade of "C" or better. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

CHEM 1412. GENERAL CHEMISTRY II
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Chemical equilibrium; phase diagrams and spectrometry; acid-base concepts; thermodynamics; kinetics; electrochemistry; nuclear chemistry; an introduction to organic chemistry and descriptive inorganic chemistry. Basic laboratory experiments supporting theoretical principles previously listed; introduction of the scientific method, experimental design, chemical instrumentation, data collection and analysis, and preparation of laboratory reports. Prerequisite: CHEM 1411 with a grade of "C" or better.

CHEM 2423. ORGANIC CHEMISTRY I
(LECTURE 3, LAB 4). CREDIT 4. ACGM.
Fundamental principles of organic chemistry will be studied in lecture and lab, including the structure, bonding, properties, and reactivity of organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. Methods for the purification and identification of organic compounds will also be examined. THIS COURSE IS INTENDED FOR STUDENTS IN SCIENCE OR PRE-PROFESSIONAL PROGRAMS. Prerequisites: CHEM 1412 with a grade of "C" or better.

CHEM 2425. ORGANIC CHEMISTRY II
(LECTURE 3, LAB 4). CREDIT 4. ACGM.
Advanced principles of organic chemistry will be studied in lecture and lab, including the structure, properties, and reactivity of aliphatic and aromatic organic molecules; and properties and behavior of organic compounds and their derivatives. Emphasis is placed on organic synthesis and mechanisms. Includes study of covalent and ionic bonding, nomenclature, stereochemistry, structure and reactivity, reaction mechanisms, functional groups, and synthesis of simple molecules. THIS COURSE IS INTENDED FOR STUDENTS IN SCIENCE OR PRE-PROFESSIONAL PROGRAMS. Prerequisites: CHEM 2423 with a grade of "C" or better.

CJLE 1329. BASIC PEACE OFFICER V
(LECTURE 1, LAB 8). CREDIT 3. WECM.
Supplemental course taken in conjunction with Basic Peace Officer Courses I, II, III, and IV. Satisfies or exceeds the Texas Commission on Law Enforcement approved Basic Peace Officer Academy Course #1000. ***THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A POLICE ACADEMY BY Texas Commission on Law Enforcement.***

CJLE 1506. BASIC PEACE OFFICER I
(LECTURE 3, LAB 8). CREDIT 5. WECM.
Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer II, III, IV, and V (supplement) to satisfy the Texas Commission on Law Enforcement approved Basic Peace Officer Training Academy. ***THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A POLICE ACADEMY BY Texas Commission on Law Enforcement.*** Introduction to fitness and wellness, history of policing, professionalism and ethics, U.S. Constitution, criminal justice system, Texas Penal Code, Texas Code of Criminal Procedure, civil process and stress management. End-of-Course Outcomes: Demonstrate outcomes set forth for Texas Commission on Law Enforcement Course #1000.

CJLE 1512. BASIC PEACE OFFICER II
(LECTURE 3, LAB 8). CREDIT 5. WECM.
Course contains field note taking, report writing, use of force laws and concepts, problem solving, professional policing approaches, patrol procedures, victims of crime, family violence, MHMR and crisis intervention, Hazmat and criminal investigation.

CJLE 1518. BASIC PEACE OFFICER III
(LECTURE 3, LAB 8). CREDIT 5. WECM.
Basic preparation for a new peace officer. Should be taken in conjunction with Basic Peace Officer I, II, IV, and V (supplement) to satisfy the Texas Commission on Law Enforcement approved Basic Peace Officer Academy. ***THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS LICENSED AS A POLICE ACADEMY BY Texas Commission on Law Enforcement.*** Course contains controlled substances laws, crowd management, crime scene investigation, interviews and interrogations, professional police driving. End-of-Course Outcomes: Demonstrate the outcomes set forth for Texas Commission on Law Enforcement Course #1000.

CJLE 1524. BASIC PEACE OFFICER IV
(LECTURE 3, LAB 8). CREDIT 5. WECM.
Covers laws directly related to field work. Topics include the Transportation Code, intoxicated driver, standardized field sobriety testing, Alcoholic Beverage Code, Texas Family Code and civil liability. Demonstration of practical skills in areas of patrol procedures, mechanics of arrest and force options, firearms safety and emergency medical care, traffic collision investigations, report writing and crime scene investigations.

CJSA 1382. COOPERATIVE EDUCATION CRIMINAL JUSTICE
(LECTURE 1, COOP 15). CREDIT 3. WECM.
Career-related activities encountered in the student's area of specialization are offered through a cooperative agreement between the College, employer and student. Under supervision of the College and the employer, the student combines classroom learning with work experience. Directly related to a technical discipline, specific learning objectives guide the student through the work experience. This course may be repeated if topics and learning outcomes vary. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. This course will transfer into certain baccalaureate programs.

COSC 1301. INTRODUCTION TO COMPUTING
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
Overview of computer systems-hardware, operating systems, and microcomputer application software, including the Internet, word processing, spreadsheets, presentation graphics, and databases. Current issues such as the effect of computers on society, and the history and use of computers in business, educational, and other modern settings are also studied. This course is not intended to count toward a student's major field of study in business or computer science. (These courses are no longer cross-listed as BCIS 1305 and 1405).

COSC 1336. PROGRAMMING FUNDAMENTALS I
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
This course introduces the fundamental concepts of structured programming and provides a comprehensive introduction to programming for computer science and technology majors. 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 1437. PROGRAMMING FUNDAMENTALS II
(LECTURE 4, LAB 1). CREDIT 4. ACGM.
This course focuses on the object-oriented programming paradigm, emphasizing the definition and use of classes along with fundamentals of object-oriented design. The course includes basic analysis of algorithms, searching and sorting techniques, and an introduction to software engineering processes. Students will apply techniques for testing and debugging software. Prerequisite: COSC 1336 or COSC 1436 Programming Fundamentals I with a grade of "C" or better.

COSC 2336. PROGRAMMING FUNDAMENTALS III
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
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 1437 Programming Fundamentals II with a grade of "C" or better.

COSC 2425. COMPUTER ORGANIZATION
(LECTURE 4, LAB 1). CREDIT 4. ACGM.
The organization of computer systems is introduced using assembly language. Topics include basic concepts of computer architecture and organization, memory hierarchy, data types, computer arithmetic, control structures, interrupt handling, instruction sets, performance metrics, and the mechanics of testing and debugging computer systems. Embedded systems and device interfacing are introduced. Prerequisite: COSC 1336 or COSC 1436 Programming Fundamentals I with a grade of "C" or better.

CRIJ 1301. INTRODUCTION TO CRIMINAL JUSTICE
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course provides a historical and philosophical overview of the American criminal justice system, including the nature, extent, and impact of crime; criminal law; and justice agencies and processes. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. This is an academic transfer course.

CRIJ 1306. COURT SYSTEMS AND PRACTICES
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course is a study of the court system as it applies to the structures, procedures, practices and sources of law in American courts, using federal and Texas statutes and case law. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. This is an academic transfer course.

CRIJ 1310. FUNDAMENTALS OF CRIMINAL LAW
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course is the study of criminal law including application of definitions, statutory elements, defenses and penalties using Texas statutes, the Model Penal Code, and case law. The course also analyzes the philosophical and historical development of criminal law and criminal culpability. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. This is an academic transfer course.

CRIJ 2313. CORRECTIONAL SYSTEMS AND PRACTICES
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course is a survey of institutional and non-institutional corrections. Emphasis will be placed on the organization and operation of correctional systems; treatment and rehabilitation; populations served; Constitutional issues; and current and future issues. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

CRIJ 2328. POLICE SYSTEMS AND PRACTICES
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course examines the establishment, role and function of police in a democratic society. It will focus on types of police agencies and their organizational structure, police-community interaction, police ethics, and use of authority. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

CSME 1202. APPLICATIONS FOR FACIAL AND SKIN CARE TECHNOLOGY
(LECTURE 1, LAB 2). CREDIT 2. WECM.
Introduction to the application of facial and skin care technology. Includes identifying and utilizing professional skin care products.

CSME 1244. INTRODUCTION TO SALON DEVELOPMENT
(LECTURE 1, LAB 3). CREDIT 2. WECM.
Overview of the procedures and operations as related to salon management. Develop procedures for appointment scheduling and record management. Identify issues related to inventory control and operational management.

CSME 1302. APPLICATIONS OF FACIAL AND SKIN CARE TECHNOLOGY I
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Introduction to the application of facial and skin care technology. Includes identifying and utilizing professional skin care products. Explain the benefits of professional skin care products. Apply and recommend professional skin care products to industry standards.

CSME 1308. PRINCIPLES OF EYELASH EXTENSIONS
(LECTURE 3, LAB 1). CREDIT 3. WECM.
This course provides the student with the practical skills necessary to safely and effectively apply eyelash extensions. Prerequisite: Students enrolled in the Cosmetology Operator or Cosmetology Instructor or Esthetician programs or currently licensed Cosmetologist or Estheticians.

CSME 1330. ORIENTATION TO NAIL TECHNOLOGY
(LECTURE 1, LAB 6). CREDIT 3. WECM.
An overview of the fundamental skills and knowledge necessary for the field of nail technology. Prerequisite: Students enrolled in the Cosmetology Operator or Cosmetology Instructor programs, or currently licensed Cosmetologists who want advanced training in Nail Technology.

CSME 1348. PRINCIPLES OF SKIN CARE
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course is an introduction of the theory and practice of skin care. Students will learn to identify the terminology related to the skin treatments, demonstrate the proper application, and exhibit workplace competencies in skin care.

CSME 1401. ORIENTATION TO COSMETOLOGY
(LECTURE 2, LAB 6). CREDIT 4. WECM.
This is an overview of the skills and knowledge necessary for the field of cosmetology. Students will learn to demonstrate introductory skills, professional ethics, sanitation and safety. The course will explain the rules and regulations of the institution, department, and state.

CSME 1405. FUNDAMENTALS OF COSMETOLOGY
(LECTURE 2, LAB 8). CREDIT 4. WECM.
A course in the basic fundamentals of cosmetology. Topics include safety and sanitation service preparation, manicure, facial, chemical services, shampoo, haircut, wet styling and comb out. Students will learn to identify fundamental concepts related to skills required by the Texas Department of Licensing and Regulations, implement fundamental skills required by the Texas Department of Licensing and Regulations.

CSME 1410. INTRODUCTION TO HAIRCUTTING AND RELATED THEORY
(LECTURE 2, LAB 8). CREDIT 4. WECM.
This is an introduction to the theory and practice of haircutting. Topics include terminology, implements, sectioning, and finishing techniques. Students will learn to identify terminology and exhibit basic workplace competencies related to haircutting and finishing techniques. Demonstrate use of implements and various sectioning, haircutting and finishing skills.

CSME 1420. ORIENTATION TO FACIAL SPECIALIST
(LECTURE 2, LAB 8). CREDIT 4. WECM.
This course is an overview of the skills and knowledge necessary for the field of facials and skin care. Instruction will demonstrate the theory, skills, safety and sanitation, and professional ethics of basic facials and skin care and explain the rules and regulations of the institution, department and state. This course is offered for Esthetic Specialty only.

CSME 1443. MANICURING AND RELATED THEORY
(LECTURE 2, LAB 8). CREDIT 4. WECM.
This course is a presentation of the theory and practice of nail technology. Instruction identifies terminology related to nail technology, demonstrates the proper application of nail technology and exhibits workplace competencies in nail technology.

CSME 1447. PRINCIPLES OF SKIN CARE/FACIALS AND RELATED THEORY
(LECTURE 2, LAB 8). CREDIT 4. WECM.
Students will receive an in-depth coverage of the theory and practice of skin care, facials and cosmetics. Instruction will identify the terminology related to the skin, products, treatments; demonstrate the proper application related to skin care and cosmetics; and exhibit workplace competencies in skin care and cosmetics. This course is required for Esthetic Specialty; Operators will enroll in CSME 1348.

CSME 1451. ARTISTRY OF HAIR, THEORY AND PRACTICE
(LECTURE 2, LAB 7). CREDIT 4. WECM.
This course provides instruction in the artistry of hair design. Topics include theory, techniques, and application of hair design. Successful students will exhibit workplace competencies related to the artistry of hair and demonstrate the professional skills of hair design.

CSME 1453. CHEMICAL REFORMATION AND RELATED THEORY
(LECTURE 2, LAB 8). CREDIT 4. WECM.
This is a presentation of the theory and practice of chemical reformation including terminology, application, and workplace competencies. This course will identify terminology related to chemical reformation, demonstrate the proper application, and exhibit workplace competencies related to chemical reformation.

CSME 1492. SPECIAL TOPICS: COSMETOLOGY INSTRUCTOR
(LECTURE 3, LAB 4). CREDIT 4. WECM.
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency. Co-requisites: CSME 1535 and CSME 1534.

CSME 1534. COSMETOLOGY INSTRUCTOR I
(LECTURE 3, LAB 6). CREDIT 5. WECM.
This course covers the fundamentals of instructing cosmetology students, including methods of teaching skills in a lab situation. Outcomes include classroom/ clinic management; designing teaching methodologies. Prerequisite: Must have a valid Texas Cosmetology Operator, Esthetic Specialty, or Manicure Specialty license. Co-requisite: CSME 1535 and CSME 1492.

CSME 1535. ORIENTATION TO THE INSTRUCTION OF COSMETOLOGY
(LECTURE 4, LAB 3). CREDIT 5. WECM.
An overview of the skills and knowledge necessary for the instruction of cosmetology students. Co-requisites: CMSE 1492 and CSME 1534.

CSME 2250. PREPARATION FOR STATE LICENSING WRITTEN EXAMINATION
(LECTURE 0, LAB 7). CREDIT 2. WECM.
Contact hours for Barber to Cosmetology Crossover: Lecture 1, Lab 3. Preparation for the state licensing written examination. Instructor approval required.

CSME 2251. PREPARATION FOR STATE LICENSING PRACTICAL EXAMINATION
(LECTURE 0, LAB 7). CREDIT 2. WECM.
Contact hours for Barber to Cosmetology Crossover: Lecture 1, Lab 3. Preparation for the state licensing practical examination. Instructor approval required.

CSME 2333. APPLICATION OF FACIAL AND SKIN TECHNOLOGY II
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Continuation of the Application of Facial and Skin Care Technology I. Preparation for the state licensing Facial Specialty Exam.

CSME 2401. PRINCIPLES OF HAIR COLORING AND RELATED THEORY
(LECTURE 2, LAB 8). CREDIT 4. WECM.
This is a presentation of the theory, practice, and chemistry of hair color. Instruction will identify terminology, demonstrate the proper application and exhibit workplace competencies related to hair color.

CSME 2414. COSMETOLOGY INSTRUCTOR II
(LECTURE 2, LAB 5). CREDIT 4. WECM.
This course is a continuation of the fundamentals of instructing cosmetology students and introduces students to methods and techniques of teaching informational theory relative to cosmetology. Prerequisites: Must have a valid Texas Cosmetology Operator, Esthetic Specialty, or Manicure Specialty license. Co-requisite: CSME 2436 and CSME 2549 or with instructor approval.

CSME 2436. ADVANCED COSMETOLOGY APPLICATIONS & RELATED THEORY
(LECTURE 3, LAB 4). CREDIT 4. WECM.
Advanced concepts of cosmetology applications including hair, skin and/or nails; professional cosmetology services; and workplace competencies. Co-requisites: CSME 2414 and CSME 2549 or with instructor approval.

CSME 2441. PREPARATION FOR THE STATE LICENSING EXAMINATION
(LECTURE 2, LAB 8). CREDIT 4. WECM.
This course provides preparation for the Texas Department of Licensing and Regulations Operator Examination. Successful students will exhibit the skills and knowledge required for the completion of the Texas Department of Licensing and Regulations examination. Instructor approval required.

CSME 2549. COSMETOLOGY INSTRUCTOR III
(LECTURE 3, LAB 6). CREDIT 5. WECM.
Presentation of lesson plan assignments and evaluation techniques. Prerequisite: Must have a valid Texas Cosmetology Operator License. Co-requisite: CSME 2414 or CSME 2436 or with instructor approval.

CTEC 2445. UNIT OPERATIONS
(LECTURE 2, LAB 6). CREDIT 4. WECM.
This course provides instruction in the principles of chemical engineering and process equipment. Emphasis is on scale-up from laboratory to plot plant. Students will get "hands-on" operating experience on glass distillation column in the lab, as well as actual operating experience on the pilot-sized glycol separation unit. Instruction on procedure writing, safety and environmental issues will also be provided. Students will describe unit operation concepts; solve elementary chemical mass/energy balances; interpret analytical data and apply distillation and fluid flow principles. Students will be tested and OSHA Certified on the Glycol Separation Unit and taught basic distillation "hands-on" troubleshooting techniques. Prerequisites: PTAC 1302, PTAC 1308, PTAC 1310, PTAC 1332, PTAC 2420, CHEM 1405, PHYS 1410 or PHYS 1401. Grade of "C" or better required in prerequisite courses.

DHYG 1162. CLINICAL - DENTAL HYGIENE/HYGIENIST
(LECTURE 0, CLIN 6). CREDIT 1. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisites: DHYG 1191, DHYG 1211, DHYG 1235, DHYG 1261 and DHYG 2201 with a grade of "C" or better.

DHYG 1191. SPECIAL TOPICS IN DENTAL HYGIENIST
(LECTURE 0, LAB 3). CREDIT 1. WECM.
This course is designed to provide an in-depth study of anesthesia and pain control as it is used in dentistry. The mechanism of actions of anesthetic agents as well as other methods of pain control will be studied, demonstrated, and practiced. Prerequisites: DHYG 1201, DHYG 1304, DHYG 1227 and DHYG 1431 with a grade of "C" or better. Co-requisites: DHYG 1211, DHYG 1235, DHYG 1261 and DHYG 2201.

DHYG 1201. OROFACIAL ANATOMY, HISTOLOGY & EMBRYOLOGY
(LECTURE 1, LAB 4). CREDIT 2. WECM.
The histology and embryology of oral tissues, gross anatomy of the head and neck, tooth morphology, and individual tooth identification. Prerequisites: Acceptance into the Dental Hygiene Program. TSIA2 Math 950 or Diagnostic 6 or MATH 0315 or MATH 0320 with a grade of "C" or better or co-requisite of MATH 0315 or MATH 0320. TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. BIOL 2401 and BIOL 2402. Co-requisites: DHYG 1304, DHYG 1227 and DHYG 1431.

DHYG 1207. GENERAL AND DENTAL NUTRITION
(LECTURE 2, LAB 0). CREDIT 2. WECM.
General nutrition and nutritional biochemistry emphasizing the effect nutrition has on oral health. Prerequisite: DHYG 1162 with a grade of "C" or better. Co-requisites: DHYG 1219, DHYG 1239, DHYG 2231 and DHYG 2261.

DHYG 1211. PERIODONTOLOGY
(LECTURE 2, LAB 0). CREDIT 2. WECM.
Normal and diseased periodontium including the structural, functional, and environmental factors. Emphasis on etiology, pathology, treatment modalities, and therapeutic and preventive periodontics. Prerequisites: DHYG 1201, DHYG 1304, DHYG 1227 and DHYG 1431 with a grade of "C" or better. Co-requisites: DHYG 1191, DHYG 1235, DHYG 1261 and DHYG 2201.

DHYG 1215. COMMUNITY DENTISTRY
(LECTURE 2, LAB 1). CREDIT 2. WECM.
The principles and concepts of community public health and dental health education emphasizing community assessment, educational planning, implementation, and evaluation including methods and materials used in teaching dental health education in various community settings. Prerequisites: DHYG 1207, DHYG 1219, DHYG 1239, DHYG 2231 and DHYG 2261 with a grade of "C" or better. Prerequisite: DHYG 1162. Co-requisites: DHYG 2153 and DHYG 2362.

DHYG 1219. DENTAL MATERIALS
(LECTURE 1, LAB 2). CREDIT 2. WECM.
Physical and chemical properties of dental materials including the application and manipulation of the various materials used in dentistry. Prerequisite: DHYG 1162 with a grade of "C" or better. Co-requisites: DHYG 1207, DHYG 1239, DHYG 2231 and DHYG 2261.

DHYG 1227. PREVENTIVE DENTAL HYGIENE CARE
(LECTURE 2, LAB 1). CREDIT 2. WECM.
The role of the dental hygienist as a therapeutic oral health care provider with emphasis on concepts of disease management, health promotion, communication, and behavior modification. Prerequisites: Acceptance into the Dental Hygiene Program. TSIA2 Math 950 or Diagnostic 6 or MATH 0315 or MATH 0320 with a grade of "C" or better or co-requisite of MATH 0315 or MATH 0320. TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. BIOL 2401 and BIOL 2402. Co-requisites: DHYG 1201, DHYG 1304 and DHYG 1431.

DHYG 1235. PHARMACOLOGY FOR THE DENTAL HYGIENIST
(LECTURE 2, LAB 0). CREDIT 2. WECM.
Classification of drugs and their uses, actions, interactions, side effects, contraindications, with emphasis on dental applications. Prerequisites: DHYG 1201, DHYG 1304, DHYG 1227 and DHYG 1431 with a grade of "C" or better. Co-requisites: DHYG 1191, DHYG 1211, DHYG 1261 and DHYG 2201.

DHYG 1239. GENERAL AND ORAL PATHOLOGY
(LECTURE 2, LAB 0). CREDIT 2. WECM.
Disturbances in human body development, diseases of the body, and disease prevention measures with emphasis on the oral cavity and associated structures. Prerequisite: DHYG 1162 with a grade of "C" or better. Co-requisites: DHYG 1207, DHYG 1219, DHYG 2231 and DHYG 2261.

DHYG 1261. CLINICAL - DENTAL HYGIENE/HYGIENIST
(LECTURE 0, CLIN 10). CREDIT 2. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisites: DHYG 1201, DHYG 1304, DHYG 1227 and DHYG 1431 with a grade of "C" or better. Co-requisites: DHYG 1191, DHYG 1211, DHYG 1235, and DHYG 2201.

DHYG 1304. DENTAL RADIOLOGY
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Fundamentals of oral radiography, including techniques, interpretation, quality assurance, and ethics. Prerequisites: Acceptance into the Dental Hygiene Program. TSIA2 Math 950 or Diagnostic 6 or MATH 0315 or MATH 0320 with a grade of "C" or better or co-requisite of MATH 0315 or MATH 0320. TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. BIOL 2401 and BIOL 2402. Co-requisites: DHYG 1201, DHYG 1227 and DHYG 1431.

DHYG 1431. PRECLINICAL DENTAL HYGIENE
(LECTURE 2, CLIN 6). CREDIT 4. WECM.
Foundational knowledge for performing clinical skills and management of medical emergencies for patients with emphasis on procedures and rationale for performing dental hygiene care. Introduction to ethical principles as they apply to dental hygiene care. Prerequisites: Acceptance into the Dental Hygiene Program. TSIA2 Math 950 or Diagnostic 6 or MATH 0315 or MATH 0320 with a grade of "C" or better or co-requisite of MATH 0315 or MATH 0320. TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. BIOL 2401 and BIOL 2402. Co-requisites: DHYG 1201, DHYG 1227 and DHYG 1304.

DHYG 2153. DENTAL HYGIENE PRACTICE
(LECTURE 1, LAB 1). CREDIT 1. WECM.
Emphasis on the laws governing the practice of dentistry and dental hygiene, moral standards, and the ethical standards established by the dental hygiene profession. Practice settings for the dental hygienist, office operations, preparation for employment, and introduction to the dental team. Prerequisites: DHYG 1207, DHYG 1219, DHYG 1239, DHYG 2231 and DHYG 2261 with a grade of "C" or better. Co-requisites: DHYG 1215 and DHYG 2362.

DHYG 2201. DENTAL HYGIENE CARE I
(LECTURE 2, LAB 1). CREDIT 2. WECM.
Dental hygiene care for the medically or dentally compromised patient including supportive treatment options. Prerequisites: DHYG 1201, DHYG 1304, DHYG 1227 and DHYG 1431 with a grade of "C" or better. Co-requisites: DHYG 1191, DHYG 1211, DHYG 1235 and DHYG 1261.

DHYG 2231. DENTAL HYGIENE CARE II
(LECTURE 2, LAB 1). CREDIT 2. WECM.
A continuation of Dental Hygiene Care I. Dental hygiene care for the medically or dentally compromised patient including supportive treatment. Prerequisite: DHYG 1162 with a grade of "C" or better. Co-requisites: DHYG 1207, DHYG 1219, DHYG 1239 and DHYG 2261.

DHYG 2261. CLINICAL - DENTAL HYGIENE/HYGIENIST
(LECTURE 0, CLIN 12). CREDIT 2. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisite: DHYG 1162 with a grade of "C" or better. Co-requisites: DHYG 1207, DHYG 1219, DHYG 1239 and DHYG 2231.

DHYG 2362. CLINICAL - DENTAL HYGIENE/HYGIENIST
(LECTURE 0, CLIN 14). CREDIT 3. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisites: DHYG 1207, DHYG 1219, DHYG 1239, DHYG 2231 and DHYG 2261. Prerequisite: DHYG 1162 with a grade of "C" or better. Co-requisites: DHYG 1215 and DHYG 2153.

DRAM 1120. REHEARSAL AND PERFORMANCE I
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Practicum in theatre open to all students with emphasis on technique and procedures with experience gained in play productions. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

DRAM 1121. REHEARSAL AND PERFORMANCE II
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Practicum in theatre open to all students with emphasis on technique and procedures with experience gained in play productions. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

DRAM 1310. THEATER APPRECIATION
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Survey of theatre including its history, dramatic works, stage techniques, production procedures, and relation to other art forms. Participation in productions may be required. Prerequisite: Eligible for ENGL 1301. This course fulfills the Fine Arts credit in the core curriculum.

DRAM 1322. STAGE MOVEMENT
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Principles, practices, and exercises in awareness, relaxation, freedom, flexibility, and expressiveness in the actor's physical instrument.

DRAM 1330. STAGECRAFT I
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Study and application of the methods and components of theatrical production that may include one or more of the following: theatre facilities, scenery construction and painting, properties, lighting, costume, makeup, sound, and theatrical management. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

DRAM 1342. COSTUME TECHNOLOGY
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Principles and techniques of costume design and construction theory for theatrical productions.

DRAM 1351. ACTING I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
An introduction to the fundamental principles and tools of acting as used in auditions, rehearsals, and performances. This may include ensemble performing, character and script analysis, and basic theatre terminology. This exploration will emphasize the development of the actor's instrument: voice, body and imagination. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

DRAM 1352. ACTING II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Exploration and further training within the basic principles and tools of acting, including an emphasis on critical analysis of oneself and others. The tools include ensemble performing, character and script analysis, and basic theatre terminology. This will continue the exploration of the development of the actor's instrument: voice, body and imagination. Prerequisite: DRAM 1351 with a grade of "C" or better.

DRAM 2120. REHEARSAL AND PERFORMANCE III
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Practicum in theatre open to all students with emphasis on technique and procedures with experience gained in play productions. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

DRAM 2121. REHEARSAL AND PERFORMANCE IV
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Practicum in theatre open to all students with emphasis on technique and procedures with experience gained in play productions. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

DRAM 2331. STAGECRAFT II
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Continued study and application of the methods and components of theatrical production that may include one or more of the following: theater facilities, scenery construction and painting, properties, lighting, costume, makeup, sound and theatrical management.

DRAM 2335. THEATER DESIGN
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Survey of principles and practices of theater design and its elements. The fundamentals of art and their application to major areas of theatrical design.

DRAM 2336. VOICE FOR THE ACTOR
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Principles, practices, and exercises in awareness, relaxation, freedom, flexibility, and expressiveness in the actor's vocal instrument.

DRAM 2355. SCRIPT ANALYSIS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Examination of foundational skills for understanding the structure and content of play scripts for interpretation and conceptualization in theater productions by directors, designers, actors, and technicians. Introduces students to significant plays in the history of dramatic literature in the playwright's social and cultural context.

DRAM 2366. FILM APPRECIATION
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Survey and analyze cinema including history, film techniques, production procedures, selected motion pictures, and cinema's impact on and reflection of society. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better. This course fulfills the Fine Arts credit in the core curriculum.

ECON 2301. PRINCIPLES OF MACROECONOMICS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
An analysis of the economy as a whole including measurement and determination of Aggregate Demand and Aggregate Supply, national income, inflation and unemployment. Other topics include international trade, economic growth, business cycles and fiscal policy and monetary policy. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. Prerequisite: TSIA2 Math Diagnostic 5 or MATH 0306, MATH 0308, MATH 0315 or MATH 0320 with a grade of "C" or better.

ECON 2302. PRINCIPLES OF MICROECONOMICS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Analysis of the behavior of individual economic agents, including consumer behavior and demand, producer behavior and supply, price and output decisions by firms under various market structures, factor markets, market failures and international trade. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. Prerequisite: TSIA2 Math Diagnostic 5 or MATH 0306, MATH 0308, MATH 0315 or MATH 0320 with a grade of "C" or better.

EDUC 1300. PSYCHOLOGY FOR SUCCESS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A study of the psychology of learning, cognition and motivation; factors that impact life-long learning; and application of learning strategies in college, career and daily life. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better. Also listed as PSYC 1300. Credit will not be given for both PSYC 1300 and EDUC 1300. This is an academic transfer course.

EDUC 1301. INTRODUCTION TO THE TEACHING PROFESSION
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
An enriched, integrated pre-service course and content experience that provides active recruitment and institutional support of students interested in a teaching career, especially in high need fields. The course provides students with opportunities to participate in early field observations at all levels of P-12 schools with varied and diverse student populations and provides students with support from college and school faculty, preferably in small cohort groups, for the purpose of introduction to and analysis of the culture of schooling and classrooms. Course content should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards; and the course must include a minimum of 16 contact hours of field experience in P-12 classrooms.

EDUC 2301. INTRODUCTION TO SPECIAL POPULATIONS
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
An enriched, integrated pre-service course and content experience that provides an overview of schooling and classrooms from the perspectives of language, gender, socioeconomic status, ethnic and academic diversity, and equity with an emphasis on factors that facilitate learning. The course provides students with opportunities to participate in early field observations of P-12 special populations and should be aligned as applicable with State Board for Educator Certification Pedagogy and Professional Responsibilities standards. Must include a minimum of 16 contact hours of field experience in P-12 classrooms with special populations. Prerequisite: EDUC 1301 with a grade of "C" or better.

EMSP 1147. PEDIATRIC LIFE SUPPORT
(LECTURE 1, LAB 0). CREDIT 1. WECM.
Theory and skills necessary for the management of pediatric or neonatal emergencies.

EMSP 1149. TRAUMA LIFE SUPPORT
(LECTURE 1, LAB 0). CREDIT 1. WECM.
Theory and skills necessary for the management of trauma emergencies.

EMSP 1205. EMERGENCY CARE ATTENDANT
(LECTURE 1, LAB 4). CREDIT 2. WECM.
Preparation for certification as an Emergency Care Attendant (ECA)/ Emergency Medical Responder (EMR).

EMSP 1260. CLINICAL - EMERGENCY MEDICAL TECHNOLOGY (LECTURE 0, CLIN 7). CREDIT 2. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. As outlined in the learning plan, students will 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 is an unpaid external learning experience. Instructor approval required.

EMSP 1338. INTRODUCTION TO ADVANCED PRACTICE (LECTURE 2, LAB 3). CREDIT 3. WECM.
Fundamental elements associated with emergency medical services to include preparatory practices, pathophysiology, medication administration, and related topics. At completion, students will describe the roles and responsibilities of advanced EMS personnel within the EMS system; apply concepts of pathophysiology and pharmacology to the assessment and management of emergency patients; administer medications; employ effective communication; interpret medical/legal issues; demonstrate ethical behaviors; and discuss well-being of the paramedic. This course satisfies requirements towards AEMT (formerly "EMT-Intermediate") certification. Prerequisites: EMSP 1501 and EMSP 1260. Co-requisite: EMSP 1355, EMSP 1356 and EMSP 2168.

EMSP 1355. TRAUMA MANAGEMENT (LECTURE 2, LAB 4). CREDIT 3. WECM.
Knowledge and skills in the assessment and management of patients with traumatic injuries. At completion, students will integrate the pathophysiological assessment findings to formulate a field impression; implement the treatment plan for the trauma patient; and integrate multiple determinants of trauma conditions into clinical care. This course satisfies requirements towards AEMT (formerly "EMT-Intermediate") certification. Prerequisite: EMSP 1501 and EMSP 1260. Co-requisite: EMSP 1338, EMSP 1356 and EMSP 2168. Instructor approval required.

EMSP 1356. PATIENT ASSESSMENT/AIRWAY MANAGEMENT (LECTURE 2, LAB 3). CREDIT 3. WECM.
Knowledge and skills required to perform patient assessment, airway management, and artificial ventilation. Perform a history and comprehensive physical exam on various patient populations; establish and/or maintain a patient airway; demonstrate oxygenation and ventilation of a patient; differentiate respiratory distress, failure and arrest; and interpret results of monitoring devices. Prerequisites: EMSP 1501 and EMSP 1260. Co-requisites: EMSP 1338, EMSP 1355 and EMSP 2168.

EMSP 1471. ADVANCED TRAUMA MANAGEMENT (LECTURE 2, LAB 6). CREDIT 4. WECM.
Assessment and management of patients with traumatic injuries with the knowledge and skills at the EMT Paramedic Level. This course will integrate the pathophysiological assessment findings at the paramedic level to develop a field impression. This course will encourage formulation of an advanced treatment plan on multisystem trauma patients with emphasis on the use of current advanced procedures and medications.

EMSP 1501. EMERGENCY MEDICAL TECHNICIAN - BASIC (LECTURE 3, LAB 8). CREDIT 5. WECM.
Preparation for certification as an Emergency Medical Technician (EMT). At completion, students will demonstrate proficiency in cognitive, psychomotor and affective domains for the Emergency Medical Technician (EMT) in accordance with the current guidelines of the credentialing agency. Instructor approval required.

EMSP 2135. ADVANCED CARDIAC LIFE SUPPORT (LECTURE 1, LAB 0). CREDIT 1. WECM.
Theory and skills necessary for the management of cardiovascular emergencies as specified by the American Heart Association (AHA) guidelines. At completion, students will demonstrate management of a cardiovascular patient according to the American Heart Association (AHA) guidelines. This course was designed to be repeated multiple times to improve student proficiency.

EMSP 2168. PRACTICUM/FIELD EXPERIENCE-EMERGENCY MEDICAL TECHNOLOGY/TECHNICIAN I (LECTURE 0, PRAC 8). CREDIT 1. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. As outlined in the learning plan, students will 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 is an unpaid external learning experience under the direct supervision of a practicing professional. This course satisfies requirements towards AEMT (formerly "EMT-Intermediate") certification. Instructor approval required.

EMSP 2205. EMS OPERATIONS (LECTURE 1, LAB 3). CREDIT 2. WECM.
Knowledge and skills to safely manage incidents and rescue situations; utilize air medical resources; identify hazardous materials and other specialized incidents.

EMSP 2243. ASSESSMENT BASED MANAGEMENT (LECTURE 1, LAB 2). CREDIT 2. WECM.
A summative experience covering comprehensive, assessment-based patient care management for the paramedic level. Instructor approval required. At completion, students will integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan at the paramedic level.

EMSP 2269. PRACTICUM (OR FIELD EXPERIENCE) - EMERGENCY MEDICAL TECHNOLOGY/TECHNICIAN (EMT PARAMEDIC) (LECTURE 0, PRAC 15). CREDIT 2. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student.

EMSP 2306. EMERGENCY PHARMACOLOGY (LECTURE 3, LAB 1). CREDIT 3. WECM.
A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages. At completion, students will categorize the classification of drugs; calculate drug dosages; and identify the therapeutic use, routes of administration, indications, contraindications, and adverse effects. Course integrates with other classes in paramedic curriculum. Instructor approval required.

EMSP 2330. SPECIAL POPULATIONS
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Knowledge and skills necessary to assess and manage ill or injured patients in diverse populations to include neonatology, pediatrics, geriatrics, and other related topics. At completion, students will integrate pathophysiological assessment findings to formulate a field impression; implement a treatment plan for diverse patients of special populations; and integrate multiple determinants of such conditions into clinical care. Instructor approval required.

EMSP 2434. MEDICAL EMERGENCIES
(LECTURE 2, LAB 6). CREDIT 4. WECM.
Knowledge and skills in the assessment and management of patients with medical emergencies, including medical overview, neurology, gastroenterology, immunology, pulmonology, urology, hematology, endocrinology, toxicology, and other related topics. At completion, students will integrate pathophysiological assessment findings to formulate a field impression; implement a treatment plan for the medical patient; and integrate multiple determinants of medical conditions into clinical care. Instructor approval required.

EMSP 2444. CARDIOLOGY
(LECTURE 2, LAB 6). CREDIT 4. WECM.
Assessment and management of patients with cardiac emergencies. Includes single and multi-lead ECG interpretation. At completion, students will integrate pathophysiological principles and assessment findings to formulate an impression; and implement a treatment plan for the cardiac patient. Instructor approval required.

EMSP 2561. CLINICAL - EMT CLINICAL - EMERGENCY MEDICAL TECHNICIAN
(LECTURE 0, CLIN 15). CREDIT 5. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. As outlined in the learning plan, students will 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 is an unpaid external learning experience. The Medical Director may, at his discretion, require additional experience beyond the minimum requirements. Instructor approval required.

ENGL 1301. COMPOSITION I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Intensive study of and practice in writing processes, from invention and researching to drafting, revising, and editing, both individually and collaboratively. Emphasis on effective rhetorical choices, including audience, purpose, arrangement, and style. Focus on writing the academic essay as a vehicle for learning, communicating and critical analysis. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

ENGL 1302. COMPOSITION II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Intensive study of and practice in the strategies and techniques for developing research-based expository and persuasive texts. Emphasis on effective and ethical rhetorical inquiry, including primary and secondary research methods; critical reading of verbal, visual, and multimedia texts; systematic evaluation, synthesis, and documentation of information sources; and critical thinking about evidence and conclusions. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2307. CREATIVE WRITING
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Practical experience in the techniques of imaginative writing. May include fiction, nonfiction, poetry, screenwriting, or drama. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

ENGL 2311. TECHNICAL WRITING
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Intensive study of and practice in professional settings. Focus on the types of documents necessary to make decisions and take action on the job, such as proposals, reports, instructions, policies and procedures, e-mail messages, letters, and descriptions of products and services. Practice individual and collaborative processes involved in the creation of ethical and efficient documents. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2322. BRITISH LITERATURE I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of the development of British literature from the Anglo-Saxon period to the Eighteenth Century. Students will study works of prose, poetry, drama, and fiction in relation to their historical, linguistic, and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2323. BRITISH LITERATURE II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of the development of British literature from the Romantic period to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2327. AMERICAN LITERATURE I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of American literature from the period of exploration and settlement through the Civil War. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2328. AMERICAN LITERATURE II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of American literature from the Civil War to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from among a diverse group of authors for what they reflect and reveal about the evolving American experience and character. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2332. WORLD LITERATURE I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of world literature from the ancient world through the sixteenth century. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2333. WORLD LITERATURE II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of world literature from the seventeenth century to the present. Students will study works of prose, poetry, drama, and fiction in relation to their historical and cultural contexts. Texts will be selected from a diverse group of authors and traditions. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2341. FORMS OF LITERATURE
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
The study of one or more literary genres including, but not limited to, poetry, fiction, drama, and film. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGL 2351. MEXICAN-AMERICAN LITERATURE
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of Mexican-American/Chicano/a literature including fiction, non-fiction, poetry and drama. Prerequisite: ENGL 1301 with a grade of "C" or better.

ENGR 1201. INTRODUCTION TO ENGINEERING
(LECTURE 1, LAB 3). CREDIT 2. ACGM.
An introduction to the engineering profession with emphasis on technical communication and team-based engineering design. Prerequisite: MATH 1314 with a grade of "C" or better.

ENGR 1304. ENGINEERING GRAPHICS I
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Introduction to computer-aided drafting using CAD software and sketching to generate two and three-dimensional drawings based on the conventions of engineering graphical communication; topics include spatial relationships, multi-view projections and sectioning, dimensioning, graphical presentation of data, and fundamentals of computer graphics. Prerequisite: MATH 1314, minimum grade "C" or better.

ENGR 2301. ENGINEERING MECHANICS - STATICS
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
Basic theory of engineering mechanics, using calculus, involving the description of forces, moments, and couples acting on stationary engineering structures; equilibrium in two and three dimensions; free-body diagrams; friction; centroids; centers of gravity; and moments of inertia. Prerequisite: MATH 1314. Prerequisite: PHYS 2425. Prerequisite/Co-requisite: MATH 2414.

ENGR 2302. ENGINEERING MECHANICS - DYNAMICS
(LECTURE 2, LAB 2). CREDIT 3. ACGM.
Basic theory of engineering mechanics, using calculus, involving the motion of particles, rigid bodies, and systems of particles; Newton's Laws; work and energy relationships; principles of impulse and momentum; application of kinetics and kinematics to the solution of engineering problems. Prerequisite: ENGR 2301 with a grade of "C" or better.

ENGR 2304. PROGRAMMING FOR ENGINEERS
(LECTURE 2, LAB 4). CREDIT 3. ACGM.
Programming principles and techniques for matrix and array operations, equation solving, and numeric simulations applied to engineering problems and visualization of engineering information; platforms include spreadsheets, symbolic algebra packages, engineering analysis software, and laboratory control software. Prerequisite: MATH 1314 with a grade of "C" or better.

ENGR 2305. ELECTRICAL CIRCUITS I
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
Principles of electrical circuits and systems. Basic circuit elements (resistance, inductance, mutual inductance, capacitance, independent and dependent controlled voltage, and current sources). Topology of electrical networks; Kirchhoff 's laws; node and mesh analysis; DC circuit analysis; operational amplifiers; transient and sinusoidal steady-state analysis; AC circuit analysis; first- and second-order circuits; Bode plots; and use of computer simulation software to solve circuit problems. Prerequisite: PHYS 2426 and MATH 2414 with a grade of "C" or better. Prerequisite/Co-requisite: MATH 2320.

ENVR 1401. ENVIRONMENTAL SCIENCE I
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
A survey of the forces, including humans, that shape our physical and biological environment, and how they affect life on earth. Introduction to the science and policy of global and regional environmental issues, including pollution, climate change, and sustainability of land, water, and energy resources. Includes a lab that covers methods used to collect and analyze environmental data. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

EPCT 1305. ENVIRONMENTAL REGULATIONS OVERVIEW
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course provides an introduction to the history of the environmental movement, including basic requirements for compliance with the environmental regulations.

EPCT 1313. CONTINGENCY PLANNING
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course provides an introduction to the development of an emergency response contingency plan for a facility or community. Emphasis is placed on analyzing the hazards, writing and implementing the contingency plans, and evaluating the effectiveness of the contingency plan.

EPCT 1341. PRINCIPLES OF INDUSTRIAL HYGIENE
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course introduces basic concepts in threshold limits, dose response, and general recognition of occupational hazards, including sampling statistics, calibration and equipment use. It also provides a study of the control of occupational hazards and sample collection and evaluation methods.

FIRS 1103. FIREFIGHTER AGILITY & FITNESS PREPARATION
(LECTURE 1, LAB 1). CREDIT 1. WECM.
Physical ability testing methods. Rigorous training in skills and techniques needed in typical fire department physical ability tests.

FIRS 1313. FIREFIGHTER CERTIFICATION III
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course is one in a series of courses in basic preparation for a new firefighter. The course must be taken in conjunction with Firefighter Certification I, II, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression. Subjects include curriculum and competencies as set forth in the TCFP Curriculum Manual for Basic Fire Suppression.

FIRS 1319. FIREFIGHTER CERTIFICATION IV
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course is one in a series of courses in basic preparation for a new firefighter. The course must be taken in conjunction with Firefighter Certification I, II, III, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression. Subjects include curriculum and competencies as set forth in the TCFP Curriculum Manual for Basic Fire Suppression.

FIRS 1323. FIREFIGHTER CERTIFICATION V
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course is one in a series of courses in basic preparation for a new firefighter. The course must be taken in conjunction with Firefighter Certification I, II III, IV, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression. Subjects include curriculum and competencies as set forth in the TCFP Curriculum Manual for Basic Fire Suppression.

FIRS 1329. FIREFIGHTER CERTIFICATION VI
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course is one in a series of courses in basic preparation for a new firefighter. The course must be taken in conjunction with Firefighter Certification I, II III, IV, V, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression. Subjects include curriculum and competencies as set forth in the TCFP Curriculum Manual for Basic Fire Suppression.

FIRS 1401. FIREFIGHTER CERTIFICATION I
(LECTURE 3, LAB 2). CREDIT 4. WECM.
This course is one in a series of courses in basic preparation for a new firefighter. The course must be taken in conjunction with Firefighter Certification II, III, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression. Subjects include curriculum and competencies as set forth in the TCFP Curriculum Manual for Basic Fire Suppression.

FIRS 1407. FIREFIGHTER CERTIFICATION II
(LECTURE 3, LAB 2). CREDIT 4. WECM.
This course is one in a series of courses in basic preparation for a new firefighter. The course must be taken in conjunction with Firefighter Certification I, III, IV, V, VI, and VII to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression. Subjects include curriculum and competencies as set forth in the TCFP Curriculum Manual for Basic Fire Suppression.

FIRS 1433. FIREFIGHTER CERTIFICATION VII
(LECTURE 3, LAB 3). CREDIT 4. WECM.
This course is one in a series of courses in basic preparation for a new firefighter. The course must be taken in conjunction with Firefighter Certification I, II III, IV, V, and VI to satisfy the Texas Commission on Fire Protection (TCFP) curriculum for Basic Structural Fire Suppression. Subjects include curriculum and competencies as set forth in the TCFP Curriculum Manual for Basic Fire Suppression.

FIRT 1353. LEGAL ASPECTS OF FIRE PROTECTION SERVICE
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course studies the rights, duties, liability concerns, and responsibilities of public fire protection agencies while performing assigned duties. Topics include basic criminal and civil law, relevant tort law, and state and federal legal systems.

FIRT 1440. FIRE INSPECTOR II
(LECTURE 3, LAB 3). CREDIT 4. WECM.
One in a series of two courses required for Fire Inspector certification. Meets the curriculum requirements of the Texas Commission on Fire Protection (TCFP) for Fire Inspector II. THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS CERTIFIED AS A TRAINING FACILITY BY THE TEXAS COMMISSION ON FIRE PROTECTION.

FIRT 1443. FIRE OFFICER II
(LECTURE 2, LAB 6). CREDIT 4. WECM.
This course meets curriculum requirements of the Texas Commission on Fire Protection (TCFP) for Fire Officer I and II Certification. Topics include competencies set forth in the TCFP curriculum for Fire Officer I and II. Upon successful completion of this course, students will be eligible to take the TCFP Certification Examinations for Fire Officer I and II, provided they satisfy TCFP testing requirements. TCFP testing and certification fees are the responsibility of the student.

FIRT 1450. FIRE INVESTIGATOR
(LECTURE 2, LAB 8). CREDIT 4. WECM.
This course meets curriculum requirements of the Texas Commission on Fire Protection (TCFP) for Fire Investigator Certification. Topics include competencies set forth in the TCFP curriculum for Fire Investigator. Students successfully completing this course will be eligible to take the TCFP Certification Examination for Fire Investigator, provided they satisfy TCFP testing requirements. TCFP testing and certification fees are the responsibility of the student.

FIRT 2111. INCIDENT SAFETY OFFICER
(LECTURE 0, LAB 3). CREDIT 1. WECM.
This course meets curriculum requirements of the Texas Commission on Fire Protection (TCFP) for Incident Safety Officer Certification. Topics include competencies set forth in the TCFP curriculum for Incident Safety Officer. Students successfully completing this course will be eligible to take the TCFP Certification Examination for Incident Safety Officer, provided they satisfy TCFP testing requirements. TCFP testing and certification fees are the responsibility of the student.

FIRT 2309. FIREFIGHTING STRATEGIES AND TACTICS I
(LECTURE 3, LAB 1). CREDIT 3. WECM.
The course studies the nature of fire problems and selection of initial strategies and tactics including an in-depth study of efficient and effective use of manpower and equipment to mitigate the emergency. Topics include the identification of potential scenarios in various fire situations, implementation of strategies and tactics, and components of an incident management system.

FIRT 2407. FIRE INSTRUCTOR II
(LECTURE 2, LAB 4). CREDIT 4. WECM.
This course meets curriculum requirements of the Texas Commission on Fire Protection (TCFP) for Fire Instructor I and II Certification. Topics include competencies set forth in the TCFP curriculum for Fire Instructor I and II. Students successfully completing this course will be eligible to take the TCFP Certification Examination for Fire Instructor I and II, provided they satisfy TCFP testing requirements. TCFP testing and certification fees are the responsibility of the student.

FIRT 2457. FIRE OFFICER IV
(LECTURE 3, LAB 4). CREDIT 4. WECM.
Meets the curriculum requirements of the Texas Commission on Fire Protection (TCFP) for Fire Officer III and IV certification. **THIS COURSE MAY BE OFFERED ONLY BY INSTITUTIONS CERTIFIED AS A TRAINING FACILITY BY THE TEXAS COMMISSION ON FIRE PROTECTION.**

GEOL 1403. PHYSICAL GEOLOGY
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Introduction to the study of the materials and processes that have modified and shaped the surface and interior of Earth over time. These processes are described by theories based on experimental data and geologic data gathered from field observations. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

GEOL 1404. HISTORICAL GEOLOGY
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
A comprehensive survey of the history of life and major events in the physical development of Earth as interpreted from rocks and fossils. Prerequisite: GEOL 1403 with a grade of "C" or better.

GEOL 1445. OCEANOGRAPHY
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Survey of oceanography and related sciences. This course is a study of the marine environment describing principles of physical, chemical, biological and geological oceanography. Topics include the origin of oceans; the composition and history of seawater; oceanic currents, tides, waves and beaches; the sea floor; plant and animal life in the sea; oceanic resources and food; marine pollution, and the changing ocean due to climate change. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay or IRW 0320 with a grade of "C" or better. Math 950+ or Diagnostic Level 6 or MATH 0306 or MATH 0315 with a grade of "C" or better.

GEOL 1447. METEOROLOGY
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
A study of the earth's atmosphere, weather and climate. Topics include the origin and evolution of the atmosphere, the seasons, solar and terrestrial radiation, the hydrologic cycle, the development of storms, and the fundamentals of global climate patterns. The course will focus on basics of weather, thunderstorms, tornadoes, hurricanes, floods, and the impact of air pollution and global warming. The lab portion of the course features hands-on meteorological observations and experiences with weather maps, forecasting, severe weather phenomena, atmospheric pollution, and climate change. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay or IRW 0320 with a grade of "C" or better. Prerequisite: Math 950+ or Diagnostic Level 6 or MATH 0315 or MATH 0320 with a grade of "C" or better. A prior course in Physics and MATH 1314 strongly recommended.

GOVT 2305. FEDERAL GOVERNMENT (FEDERAL CONSTITUTION & TOPICS)
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Origin and development of the U.S. Constitution, structure and powers of the national government including the legislative, executive, and judicial branches; federalism; political participation; the national election process; public policy; civil liberties and civil rights. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

GOVT 2306. TEXAS GOVERNMENT (TEXAS CONSTITUTION & TOPICS)
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Origin and development of the Texas constitution, structure and powers of state and local government, federalism and inter-governmental relations, political participation, the election process, public policy and the political culture of Texas. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

HIST 1301. U S HISTORY I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of the social, political, economic, cultural, and intellectual history of the United States from the pre-Columbian era to the Civil War/Reconstruction period. United States History I includes the study of pre-Columbian, colonial, revolutionary, early national, slavery and sectionalism and the Civil War/ Reconstruction eras. Themes that may be addressed in United States History I include American settlement and diversity, American culture, religion, civil and human rights, technological change, economic change, immigration and migration and creation of the federal government. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

HIST 1302. U S HISTORY II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of the social, political, economic, cultural, and intellectual history of the United States from the Civil War/Reconstruction era to the present. United States History II examines industrialization, immigration, world wars, the Great Depression, Cold War and post-Cold War eras. Themes that may be addressed in United States History II include American culture, religion, civil and human rights, technological change, economic change, immigration and migration, urbanization and suburbanization, the expansion of the federal government and the study of U.S. foreign policy. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

HIST 2301. TEXAS HISTORY
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of the political, social, economic, cultural, and intellectual history of Texas from the pre-Columbian era to the present. Themes that may be addressed in Texas History include Spanish colonization and Spanish Texas, Mexican Texas, the Republic of Texas, statehood and secession, oil, industrialization, and urbanization, civil rights and modern Texas. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

HITT 1255. HEALTH CARE STATISTICS
(LECTURE 2, LAB 1). CREDIT 2. WECM.
Principles of health care statistics with emphasis in hospital statistics. Skill development in computation and calculation of health data. Prerequisite: MATH 1342 with a grade of "C" or better.

HITT 1301. HEALTH DATA CONTENT AND STRUCTURE
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Introduction to systems and processes for collecting, maintaining, and disseminating primary and secondary health related information including content of health record, documentation requirements, registries, indices, licensing, regulatory agencies, forms, and screens.

HITT 1305. MEDICAL TERMINOLOGY I
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Study of medical terms through word origin and structure. Introduction to abbreviations and symbols, surgical and diagnostic procedures, and medical specialties.

HITT 1311. HEALTH INFORMATION SYSTEMS
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Introduction to health IT standards, health-related data structures, software applications, and enterprise architecture in health care and public health. Prerequisite: HITT 1301 with a grade of "C" or better.

HITT 1341. CODING AND CLASSIFICATION SYSTEMS
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Fundamentals of coding rules, conventions, and guidelines using clinical classification systems. Prerequisites: HITT 1305 and BIOL 2401 with a grade of "C" or better. Co-requisites: HITT 2330.

HITT 1345. HEALTH CARE DELIVERY SYSTEM
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Examination of delivery systems including organization, financing, accreditation, licensure, and regulatory agencies. Prerequisite: HITT 1301 with a grade of "C" or better.

HITT 1353. LEGAL AND ETHICAL ASPECTS OF HEALTH INFORMATION
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Concepts of privacy, security, confidentiality, ethics, health care legislation, and regulations relating to the maintenance and use of health information. Prerequisite: HITT 1301 with a grade of "C" or better.

HITT 2266. PRACTICUM - REGISTERED HEALTH INFORMATION TECHNICIAN REVIEW
(LECTURE 0, PRAC 14). CREDIT 2. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, College and student. Must be taken in the last semester.

HITT 2330. PATHOPHYSIOLOGY AND PHARMACOLOGY
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Study of the pathology and general health management of diseases and injuries across the life span. Topics include etiology, symptoms, and the physical and psychological reactions to diseases and injuries. A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages. Prerequisites: HITT 1305 and BIOL 2401 with a grade of "C" or better. Co-requisite: HITT 1341.

HITT 2335. CODING AND REIMBURSEMENT METHODOLOGIES
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Advanced coding techniques with emphasis on case studies, health records, and federal regulations regarding prospective payment systems and methods of reimbursement. Prerequisite: HITT 1341 with a grade of "C" or better.

HITT 2339. HEALTH INFORMATION ORGANIZATION AND SUPERVISION
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Principles of organization and supervision of human, fiscal, and capital resources. Prerequisite: HITT 1301 with a grade of "C" or better.

HITT 2343. QUALITY ASSESSMENT AND PERFORMANCE IMPROVEMENT
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Study of quality standards and methodologies in the health information management environment. Topics include licensing, accreditation, compilation and presentation of data in statistical formats, quality management and performance improvement functions, utilization management, risk management, and medical staff data quality issues. Approaches to assessing patient safety issues and implementation of quality management and reporting through electronic systems and approaches to assessing patient safety issues and implementation of quality management and reporting through electronic systems. Prerequisite: HITT 1301 with a grade of "C" or better.

HITT 2346. ADVANCED MEDICAL CODING
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Advanced concepts of ICD and CPT coding rules, conventions, and guidelines in complex case studies. Investigation of government regulations and changes in health care reporting. Prerequisite: HITT 1341 with a grade of "C" or better.

HPRS 1201. INTRODUCTION TO HEALTH PROFESSIONS
(LECTURE 2, LAB 0). CREDIT 2. WECM.
An overview of roles of various members of the health care system, educational requirements, and issues affecting the delivery of health care.

HRPO 2301. HUMAN RESOURCES MANAGEMENT
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Behavioral and legal approaches to the management of human resources in organizations. Offered spring only.

HUMA 1301. INTRODUCTION TO THE HUMANITIES I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This stand-alone course is an interdisciplinary survey of cultures focusing on the philosophical and aesthetic factors in human values with an emphasis on the historical development of the individual and society and the need to create. Prerequisite: ENGL 1301 with a grade of "C" or better.

HUMA 1302. INTRO TO THE HUMANITIES II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This stand-alone course is an interdisciplinary survey of cultures focusing on the philosophical and aesthetic factors in human values with an emphasis on the historical development of the individual and society and the need to create. HUMA 1301 is not a prerequisite for HUMA 1302. Prerequisite: ENGL 1301 with a grade of "C" or better.

IFWA 1318. NUTRITION FOR THE FOOD SERVICE PROFESSIONAL
(LECTURE 2, LAB 2). CREDIT 3. WECM.
An introduction to nutrition including nutrients, digestion and metabolism, menu planning, recipe modification, dietary guidelines and restrictions, diet and disease, and healthy cooking techniques. Prerequisites: CHEF 1205, CHEF 1301, CHEF 2301 and PSTR 1301 with a grade of "C" or better.

IMED 1316. WEB DESIGN I
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Instruction in web design and related graphic design issues including mark-up languages, web sites, and browsers. Offered fall only.

IMED 2315. WEB DESIGN II
(LECTURE 2, LAB 4). CREDIT 3. WECM.
A study of mark-up language and advanced layout techniques for creating web pages. Emphasis on identifying the target audience and producing web sites, according to accessibility standards, cultural appearance, and legal issues. Prerequisite: IMED 1316 with a grade of "C" or better. Offered spring only.

IRW 0320. ADVANCED INTEGRATED READING AND WRITING
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course integrates more advanced preparation than IRW 0300 regarding academic reading skills and skills in writing a variety of academic assignments. Topics include critical reading and writing skills. Students will be expected to write compositions similar to those assigned in ENGL 1301. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

ITNW 1308. IMPLEMENTING AND SUPPORTING CLIENT OPERATING SYSTEMS
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course covers the fundamentals of managing and configuring local, network, and distributed network clients. Topics may adapt to changes in industry practices.

ITNW 1309. FUNDAMENTALS OF CLOUD COMPUTING
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Introduction to cloud computing from a business and technical perspective, including cloud concepts, services, architecture, system integration, connectivity, data center migration, administration, security, compliance and technical support. Coverage includes preparation for industry certifications. Topics may adapt to changes in industry practices.

ITNW 1325. FUNDAMENTALS OF NETWORKING TECHNOLOGIES
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course offers instruction in networking technologies and their implementation. Topics include the OSI and TCP/IP reference models, network protocols, transmission media, and networking hardware and software. The student will learn to 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 Ara Networks and Wide Area Networks and Wide Area Networks and identify the components used to expand a LAN into a WAN.

ITNW 1336. CLOUD DEPLOYMENT & INFRASTRUCTURE MANAGEMENT
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Focus on Cloud infrastructure, deployment, security models, and key considerations in migrating to Cloud computing. Includes the technologies and processes required to build on-premise and Cloud environments, including computation, storage, networking, virtualization, business continuity, security, and management.

ITNW 1354. IMPLEMENTING AND SUPPORTING SERVERS
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course provides opportunity for the development of skills necessary to implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

ITNW 1358. NETWORK+
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Assists individuals in preparing for the Computing Technology Industry Association (CompTIA) Network+ certification exam and career as a network professional. Topics include: Identify and define terminology, hardware, and software components of computer networks; utilize equipment, protocols, and topologies to differentiate between various network systems; demonstrate skills installing network hardware, software, and cable; troubleshoot network connectivity; configure network protocol; and install and configure network client software.

ITNW 1380. COOPERATIVE EDUCATION - COMPUTER SYSTEMS NETWORKING AND TELECOMMUNICATIONS
(LECTURE 1, COOP 20). CREDIT 3. WECM.
This is an intermediate or advanced course with lecture and work-based instruction that helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. Indirect supervision is provided by the work supervisor while the lecture is provided by College faculty or by other individuals under the supervision of the educational institution. Cooperative education may be a paid or unpaid learning experience. Prerequisites: Completion of 12 credit hours or equivalent work experience.

ITNW 1445. IMPLEMENTING NETWORK DIRECTORY SERVICES
(LECTURE 2, LAB 4). CREDIT 4. WECM.
In-depth coverage of the skills necessary to install, configure, and administer Network Directory service. Prerequisite: ITNW 1354 with a grade of "C" or better. Offered spring only.

ITNW 2312. ROUTERS
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Router configuration for local area networks and wide area networks. Includes Internet Protocol (IP) addressing techniques and intermediate routing protocols. Prerequisite or co-requisite: ITNW 1325. Offered fall only.

ITSC 1305. INTRODUCTION TO PC OPERATING SYSTEMS
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Introduction to personal computer operating systems including installation, configuration, file management, memory and storage management, control of peripheral devices and use of utilities.

ITSC 1315. IT PROJECT MANAGEMENT
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Use of project management tools for developing a project plan including timelines, milestones, scheduling, life cycle phases, management frameworks, skills, and processes.

ITSC 1316. LINUX INSTALLATION AND CONFIGURATION
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Students will receive an introduction to the open-source Linux operating system. This course includes Linux installation, basic administration, utilities and commands, upgrading, networking, security, and application installation. Emphasizes hands-on setup, administration, and management of Linux. Instruction also covers maintaining and securing reliable Linux systems. The student will install, administer, and manage a secure and reliable Linux system; demonstrate proficiency with Linux utilities, commands, and applications; demonstrate effective Linux operation system set-up; identify and resolve security-based issues; and identify networking principles necessary to integrate a Linux system into an existing network. Offered fall only.

ITSC 1325. PERSONAL COMPUTER HARDWARE
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Current personal computer hardware including assembly, upgrading, setup, configuration and troubleshooting.

ITSC 1380. COOPERATIVE EDUCATION - COMPUTER AND INFORMATION SCIENCES, GENERAL
(LECTURE 1, COOP 14). CREDIT 3. WECM.
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. Prerequisite: ITSC 1392 or ITSE 1392 with a grade of "C" or better.

ITSC 1391. SPECIAL TOPICS IN COMPUTER AND INFORMATION SCIENCES, GENERAL LINUX
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course covers shells, scripting and data management, user interfaces and desktops, administrative tasks, essential system services, networking fundamentals and security. Prerequisite: ITSC 1316 with a grade of "C" or better. Offered spring only.

ITSC 1392. SPECIAL TOPICS IN DATA PROCESSING AND DATA PROCESSING TECHNOLOGY/TECHNICIAN - BLUE PRISM II: DEVELOPMENT OF ROBOTIC PROCESS AUTOMATION USING BLUE PRISM TOOLS
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course offers the essential skills and knowledge required to configure a simple Blue Prism process automation solution. The course introduces key RPA Design and Development strategies and methodologies, in the context of Blue Prism products. A student completing the course shall develop the competence to configure a robot for a defined process. The course prepares the student for - "Blue Prism Associate Developer Certification" exam. Prerequisite: ITSW 1391 with a grade of "C" or better.

ITSC 2325. ADVANCED LINUX
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Provides instruction in advance open-source Linux operating system. Develops directory services for clients, support users remotely, and install and configure network services.

ITSE 1380. COOPERATIVE EDUCATION - COMPUTER PROGRAMMING
(LECTURE 1, COOP 14). CREDIT 3. WECM.
This is an intermediate or advanced course with lecture and work-based instruction that helps students gain practical experience in the discipline, enhance skills, and integrate knowledge. Indirect supervision is provided by the work supervisor while the lecture is provided by College faculty or by other individuals under the supervision of the educational institution. Cooperative education may be a paid or unpaid learning experience. Prerequisites: Completion of 12 credit hours or equivalent work experience.

ITSE 1391. SPECIAL TOPICS IN COMPUTER PROGRAMMING - UIPATH I: ROBOTIC PROCESS AUTOMATION DESIGN AND DEVELOPMENT
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course offers comprehensive knowledge and professional- level skills focused on developing and deploying software robots. The course assumes no prior knowledge of RPA. It starts with the basic concepts of Robotic Process Automation. It further builds on these concepts and introduces key RPA Design and Development strategies and methodologies, specifically in the context of UiPath products. A student undergoing the course shall develop the competence to design and develop a robot for a defined process. This course prepares the student to create software robots utilizing UiPath tools.

ITSE 1392. SPECIAL TOPICS IN COMPUTER PROGRAMMING - UIPATH II: INTERMEDIATE ROBOTIC PROCESS AUTOMATION (RPA) DESIGN AND DEVELOPMENT
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course offers comprehensive knowledge and professional- level skills focused on developing knowledge skills and tools necessary to elicit, document, deliver and manage requirements throughout the technology delivery life-cycle. The course prepares the student for UiPath's RPA Associate Certification. Prerequisite: ITSE 1391 with a grade of "C" or better.

ITSE 1393. SPECIAL TOPICS IN COMPUTER SYSTEMS ANALYSIS - UIPATH III: ADVANCED RPA DEVELOPER
(LECTURE 2, LAB 3). CREDIT 3. WECM.
UiPath III provides training for the Advanced RPA Developer. This course prepares the student for the UiPath Certification UiARD. This course is for technical RPA roles and covers the Robotic Enterprise Framework. Prerequisite: ITSE 1392 with a grade of "C" or better.

ITSE 1394. SPECIAL TOPICS IN COMPUTER SCIENCE - BLUE PRISM III: ADVANCED ROBOTIC PROCESS AUTOMATION
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course offers advanced skills and knowledge required to design and develop robotic process automation. The course provides a deep understanding of RPA Design and Development strategies and methodologies. A student completing the course shall design, develop, configure, troubleshoot, modify and make improvements depending on project requirements for a defined process. The course prepares the student for - "Blue Prism Developer Certification" exam. Prerequisite: ITSC 1392 Blue Prism II with a grade of "C" or better.

ITSE 2309. DATABASE PROGRAMMING
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course studies database development using database programming techniques emphasizing database structures, modeling, and database access. This course will transfer into certain baccalaureate programs. Offered fall only.

ITSW 1307. INTRODUCTION TO DATABASE
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course is an introduction to relational and non-relational database theory and the practical applications of a contemporary databases. Topics may adapt to changes in industry practices. Upon successful completion of this course the student will be able to identify database terminology and concepts, plan, define, and design a database, design and generate tables, forms and reports, and design and process queries. This course assumes computer literacy. This course leads to the Microsoft certification in SQL Server Database Administration Fundamentals. Offered spring only.

ITSW 1391. SPECIAL TOPICS IN DATA PROCESSING TECHNOLOGY/ TECHNICIAN - BLUE PRISM I: FUNDAMENTALS OF ROBOTIC PROCESS AUTOMATION USING BLUE PRISM TOOLS
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course provides an introduction to concepts and activities associated with configuring a Blue Prism Process Solution. The course assumes no prior knowledge of RPA. Students have the opportunity to acquire skills and knowledge to build an end-to- end Blue Prism Solution.

ITSY 1342. INFORMATION TECHNOLOGY SECURITY
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Instruction in security for network computer hardware, software, virtualization, and data, including physical security; backup procedures; relevant tools; encryption; and protection from viruses. Topics may adapt to changes in industry practices.

ITSY 2301. FIREWALLS & NETWORK SECURITY
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Identify elements of firewall design, types of security threats and responses to security attacks. Use Best Practices to design, implement, and monitor a network security plan. Examine security incident postmortem reporting and ongoing network security activities.

ITSY 2342. INCIDENT RESPONSE AND HANDLING
(LECTURE 2, LAB 4). CREDIT 3. WECM.
In-depth coverage of incident response and incident handling, including identifying sources of attacks and security breaches; analyzing security logs; recovering the system to normal; performing postmortem analysis; and implementing and modifying security measures.

ITSY 2359. SECURITY ASSESSMENT AND AUDITING
(LECTURE 2, LAB 4). CREDIT 3. WECM.
Comprehensive experience for the security curriculum. Synthesizes technical material covered in prior courses to monitor, audit, analyze, and revise computer and network security systems that ensure appropriate levels of protection are in place to assure regulatory compliance.

MATH 0306. MATHEMATICAL FOUNDATIONS
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
This course prepares students for college-level courses in Quantitative Reasoning and Statistical Reasoning. Topics include numeracy and the real number system with emphasis on whole numbers, integers, and rational numbers; rates, ratios, and proportions; percentages; solving linear equations; linear models; data interpretations, including graphs and tables; problem solving; and measurement and geometry. Prerequisite: TSIA2 Math Diagnostic 4.

MATH 0308. FOUNDATIONS OF MATHEMATICAL REASONING
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
This course prepares students for a college level courses in Statistical Reasoning and Quantitative Reasoning. Topics include: numeracy with an emphasis on estimation and fluency with large numbers; evaluating expressions and formulas; rates, ratios, and proportions; percentages; solving equations; linear models; data interpretations, including graphs and tables; verbal, algebraic and graphical representations of functions; exponential models. Prerequisite: TSIA2 Math Diagnostic 5. This course does not transfer.

MATH 0315. FOUNDATIONS OF ALGEBRA
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
This course is designed to develop skills and understanding in the following areas: basic algebra concepts to include exponents, factoring and radicals; relations and functions, inequalities, algebraic expressions, and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations. Prerequisites/co-requisites: Prerequisite of TSIA2 Math Diagnostic 4 and a "Proficient" rating on the Algebraic Reasoning portion of the TSIA2 Test; or TSIA2 Math Diagnostic 4 and a declared major that requires MATH 1314 or MATH 1324 to access the MATH 0315 corequisite.

MATH 0320. INTERMEDIATE ALGEBRA
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
This course is designed to develop skills and understanding in the following areas: relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations. Prerequisites/co-requisites: Prerequisite of TSIA2 Math Diagnostic 5. This course does not transfer.

MATH 1314. COLLEGE ALGEBRA
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Prerequisite: TSIA2 Math 950 or Diagnostic 6 or MATH 0315 or MATH 0320 with a grade of "C" or better or co-requisite of MATH 0315 or MATH 0320.

MATH 1324. MATH FOR BUSINESS AND SOCIAL SCIENCE
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
The application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value. Prerequisite: TSIA2 Math 950 or Diagnostic 6 or MATH 0315 or MATH 0320 with a grade of "C" or better or co-requisite of MATH 0315.

MATH 1325. BUSINESS CALCULUS
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences. Prerequisites: MATH 1314 or MATH 1324 with a grade of "C" or better or COM Math Placement Test.

MATH 1332. CONTEMPORARY MATH (QUANTITATIVE REASONING)
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication will be embedded throughout the course. Prerequisites/co-requisites: Prerequisite: TSIA2 Math 950 or Diagnostic 6 or MATH 0306 or MATH 0308 with a grade of "C" or better or co-requisite of MATH 0306 or MATH 0308. Contact Counseling to determine which math course satisfies requirement of desired baccalaureate program.

MATH 1342. ELEMENTARY STATISTICAL METHODS
(LECTURE 3, LAB 1). CREDIT 3. ACGM.
Collection, analysis, presentation and interpretation of data and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Prerequisites/co-requisites: Prerequisite: TSIA2 Math 950 or Diagnostic 6 or MATH 0306 or MATH 0308 with a grade of "C" or better or co-requisite of MATH 0308.

MATH 1350. MATHEMATICS FOR TEACHERS I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the conceptual development of the following: sets, functions, numeration systems, number theory, and properties of the various number systems with an emphasis on problem solving and critical thinking. Prerequisite: MATH 1314 with a grade of "C" or better.

MATH 1351. MATHEMATICS FOR TEACHERS II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the concepts of geometry, measurement, probability, and statistics with an emphasis on problem solving and critical thinking. Prerequisite: MATH 1350 with a grade of "C" or better.

MATH 2305. DISCRETE MATHEMATICS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A course designed to prepare math, computer science, and engineering majors for a background in abstraction, notation, and critical thinking for the mathematics most directly related to computer science. Topics include: logic, relations, functions, basic set theory, countability and counting arguments, proof techniques, mathematical induction, combinatorics, discrete probability, recursion, sequence and recurrence, elementary number theory, graph theory, and mathematical proof techniques. Prerequisite: MATH 2413 with a grade of "C" or better.

MATH 2318. LINEAR ALGEBRA
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Introduces and provides models for application of the concepts of vector algebra. Topics include finite dimensional vector spaces and their geometric significance; representing and solving systems of linear equations using multiple methods, including Gaussian elimination and matrix inversion; matrices; determinants; linear transformations; quadratic forms; eigenvalues and eigenvector; and applications in science and engineering. Prerequisite: MATH 2414 with grade of "C" or better.

MATH 2320. DIFFERENTIAL EQUATIONS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Ordinary differential equations, including linear equations, systems of equations, equations with variable coefficients, existence and uniqueness of solutions, series solutions, singular points, transform methods, and boundary value problems; application of differential equations to real-world problems. Prerequisite: MATH 2414 with grade "C" or better.

MATH 2412. PRECALCULUS
(LECTURE 4, LAB 0). CREDIT 4. ACGM.
In-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Prerequisites: MATH 1314 grade "C" or better or COM Math Placement Test.

MATH 2413. CALCULUS I
(LECTURE 4, LAB 1). CREDIT 4. ACGM.
Limits and continuity; the Fundamental Theorem of Calculus; definition of the derivative of a function and techniques of differentiation; applications of the derivative to maximizing or minimizing a function; the chain rule, mean value theorem, and rate of change problems; curve sketching; definite and indefinite integration of algebraic, trigonometric, and transcendental functions, with an application to calculation of areas. Prerequisite: MATH 2412 with a grade of "C" or better or COM Placement Test.

MATH 2414. CALCULUS II
(LECTURE 4, LAB 0). CREDIT 4. ACGM.
Differentiation and integration of transcendental functions; parametric equations and polar coordinates; techniques of integration; sequences and series; improper integrals. Prerequisite: MATH 2413 with a grade of "C" or better.

MATH 2415. CALCULUS III
(LECTURE 4, LAB 0). CREDIT 4. ACGM.
Advanced topics in calculus, including vectors and vector-valued functions, partial differentiation, Lagrange multipliers, multiple integrals, and Jacobians; application of the line integral, including Green's Theorem, the Divergence Theorem, and Stokes' Theorem. Prerequisite: MATH 2414 with a grade of "C" or better.

MDCA 1254. CERTIFIED MEDICAL ASSISTANT EXAM REVIEW
(LECTURE 2, LAB 0). CREDIT 2. WECM.
A preparation for the Certified Medical Assisting Exam, including a review of all three components of the CMA exam. Presents an explanation of how the exam is scored and provides opportunities to take practice exams. Prerequisites: MDCA 1309, MDCA 1302, HITT 1305, MDCA 1443, MDCA 1417, MDCA 1452 and MDCA 1448 with a grade of "C" or better.

MDCA 1302. HUMAN DISEASE/PATHOPHYSIOLOGY
(LECTURE 3, LAB 0). CREDIT 3. WECM.
A study of anatomy and physiology with emphasis on human pathophysiology, including etiology, prognosis, medical treatment, signs and symptoms of common diseases of all body systems. Co-requisite: MDCA 1309.

MDCA 1305. MEDICAL LAW AND ETHICS
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Instruction in principles, procedures, and regulation involving legal and ethical relationships among physicians, patients and medical assistants. Includes current ethical issues and risk management as they relate to the practice of medicine and fiduciary responsibilities. Prerequisites: MDCA 1302, MDCA 1309, MDCA 1321, MDCA 1443 and HITT 1305 with a grade of "C" or better.

MDCA 1309. ANATOMY AND PHYSIOLOGY FOR MEDICAL ASSISTANTS
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Emphasis on normal human anatomy and physiology of cells, tissues, organs, and systems with overview of common pathophysiology. Co-requisite: MDCA 1302.

MDCA 1321. ADMINISTRATIVE PROCEDURES
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Medical office procedures including appointment scheduling, medical records creation and maintenance, phone communications, financial processes, coding, billing, collecting, third party reimbursement, credit arrangements and computer use in the medical office.

MDCA 1417. PROCEDURES IN A CLINICAL SETTING
(LECTURE 2, LAB 4). CREDIT 4. WECM.
Emphasis on patient-centered assessment, examination, intervention, and treatment as directed by physician. Include vital sign, collection and documentation of patient information, asepsis, minor surgical procedures and other treatments as appropriate for the medical office. Prerequisites: MDCA 1302 and MDCA 1309 with a grade of "C" or better.

MDCA 1443. MEDICAL INSURANCE
(LECTURE 3, LAB 2). CREDIT 4. WECM.
Emphasizes accurate ICD-10 and CPT-4 coding of office procedures for payment/reimbursement by patient or third party and prevention of insurance fraud. Additional topics may include managed care or medical economics.

MDCA 1448. PHARMACOLOGY & ADMINISTRATION OF MEDICATIONS
(LECTURE 3, LAB 2). CREDIT 4. WECM.
Instruction in concepts and application of pharmacological principles. Focuses on drug classification, principle and procedures of medication administration, mathematical systems and conversions, calculation of drug problems and medico-legal responsibilities of the medical assistant. Prerequisite: MDCA 1302 and MDCA 1309 with a grade of "C" or better.

MDCA 1452. MEDICAL ASSISTANT LABORATORY PROCEDURES (LECTURE 2, LAB 4). CREDIT 4. WECM.
Procedures depicted in the Current Clinical Laboratory Improvement Act (CLIA). Includes blood collection, specimen handling, and basic urinalysis, identification of normal ranges, quality assurance and quality control. May include electrocardiography. Prerequisites: MDCA 1302 and MDCA 1309 with a grade of "C" or better.

MDCA 1460. CLINICAL - MEDICAL/CLINICAL ASSISTANT (LECTURE 0, CLIN 12). CREDIT 4. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinical professional. Prerequisite: Approval by program director.

MRKG 1301. CUSTOMER RELATIONSHIP MANAGEMENT (LECTURE 3, LAB 0). CREDIT 3. WECM.
General principles of customer relationship management including skills, knowledge, attitudes, and behaviors. Offered fall only.

MRKG 1311. PRINCIPLES OF MARKETING (LECTURE 3, LAB 0). CREDIT 3. WECM.
Introduction to the marketing mix functions and process. Includes identification of consumer and organizational needs and explanation of environmental issues. Offered spring only.

MRKG 2333. PRINCIPLES OF SELLING (LECTURE 3, LAB 0). CREDIT 3. WECM.
Overview of the selling process. Identification of the elements of the communication process between buyers and sellers. Examination of the legal and ethical issues of organizations which affect salespeople. Offered spring only.

MRKG 2349. ADVERTISING AND SALES PROMOTION (LECTURE 3, LAB 0). CREDIT 3. WECM.
Integrated marketing communications. Includes advertising principles and practices. Emphasizes multi-media of persuasive communication including buyer behavior, budgeting, and regulatory constraints. Offered spring only.

MUAP 1101. INDIVIDUAL VIOLIN (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1105. INDIVIDUAL VIOLA (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1106. INDIVIDUAL VIOLA (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1109. INDIVIDUAL CELLO (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1110. INDIVIDUAL CELLO (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1113. INDIVIDUAL BASS VIOLIN (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1114. INDIVIDUAL BASS VIOLIN (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1117. INDIVIDUAL FLUTE/PICCOLO (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1118. INDIVIDUAL FLUTE/PICCOLO (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1121. INDIVIDUAL OBOE (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1122. INDIVIDUAL OBOE (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1125. INDIVIDUAL BASSOON (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1126. INDIVIDUAL BASSOON (LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1129. INDIVIDUAL CLARINET
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1130. INDIVIDUAL CLARINET
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1133. INDIVIDUAL SAXOPHONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1134. INDIVIDUAL SAXOPHONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1137. INDIVIDUAL TRUMPET
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1138. INDIVIDUAL TRUMPET
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1141. INDIVIDUAL FRENCH HORN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1142. INDIVIDUAL FRENCH HORN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1145. INDIVIDUAL TROMBONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1146. INDIVIDUAL TROMBONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1149. INDIVIDUAL EUPHONIUM/BARITONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1150. INDIVIDUAL EUPHONIUM/BARITONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 1153. INDIVIDUAL TUBA
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 1154. INDIVIDUAL TUBA
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 1157. INDIVIDUAL PERCUSSION
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1158. INDIVIDUAL PERCUSSION
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1161. INDIVIDUAL GUITAR
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1162. INDIVIDUAL GUITAR
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1165. INDIVIDUAL ORGAN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1169. INDIVIDUAL PIANO
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1170. INDIVIDUAL PIANO
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: MUAP 1169 with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 1181. INDIVIDUAL VOICE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1182. INDIVIDUAL VOICE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1185. IMPROVISATION
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1186. IMPROVISATION
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1201. INDIVIDUAL VIOLIN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1202. INDIVIDUAL VIOLIN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1205. INDIVIDUAL VIOLA
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1206. INDIVIDUAL VIOLA
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1209. INDIVIDUAL CELLO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1210. INDIVIDUAL CELLO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1213. INDIVIDUAL BASS VIOLIN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1214. INDIVIDUAL BASS VIOLIN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1217. INDIVIDUAL FLUTE/PICCOLO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1218. INDIVIDUAL FLUTE/PICCOLO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1221. INDIVIDUAL OBOE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1222. INDIVIDUAL OBOE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1225. INDIVIDUAL BASSOON
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1226. INDIVIDUAL BASSOON
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1229. INDIVIDUAL CLARINET
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1230. INDIVIDUAL CLARINET
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1233. INDIVIDUAL SAXOPHONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1234. INDIVIDUAL SAXOPHONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1237. INDIVIDUAL TRUMPET
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1238. INDIVIDUAL TRUMPET
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1241. INDIVIDUAL FRENCH HORN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1242. INDIVIDUAL FRENCH HORN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1245. INDIVIDUAL TROMBONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1246. INDIVIDUAL TROMBONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1249. INDIVIDUAL EUPHONIUM/BARITONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1250. INDIVIDUAL EUPHONIUM/BARITONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1253. INDIVIDUAL TUBA
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1254. INDIVIDUAL TUBA
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1257. INDIVIDUAL PERCUSSION
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1258. INDIVIDUAL PERCUSSION
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1261. INDIVIDUAL GUITAR
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1262. INDIVIDUAL GUITAR
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1265. INDIVIDUAL ORGAN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1266. INDIVIDUAL ORGAN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1269. INDIVIDUAL PIANO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1270. INDIVIDUAL PIANO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: MUAP 1269 with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 1281. INDIVIDUAL VOICE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1282. INDIVIDUAL VOICE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1285. INDIVIDUAL IMPROVISATION I
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 1286. INDIVIDUAL IMPROVISATION II
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2103. INDIVIDUAL VIOLIN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2104. INDIVIDUAL VIOLIN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2107. INDIVIDUAL VIOLA
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2108. INDIVIDUAL VIOLA
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2111. INDIVIDUAL CELLO
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2112. INDIVIDUAL CELLO
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2115. INDIVIDUAL BASS VIOLIN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2116. INDIVIDUAL BASS VIOLIN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2119. INDIVIDUAL FLUTE/PICCOLO
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2120. INDIVIDUAL FLUTE/PICCOLO
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2123. INDIVIDUAL OBOE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2124. INDIVIDUAL OBOE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2127. INDIVIDUAL BASSOON
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2128. INDIVIDUAL BASSOON
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2131. INDIVIDUAL CLARINET
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2132. INDIVIDUAL CLARINET
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2135. INDIVIDUAL SAXOPHONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2136. INDIVIDUAL SAXOPHONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2139. INDIVIDUAL TRUMPET
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2140. INDIVIDUAL TRUMPET
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2143. INDIVIDUAL FRENCH HORN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2144. INDIVIDUAL FRENCH HORN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2147. INDIVIDUAL TROMBONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2148. INDIVIDUAL TROMBONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2151. INDIVIDUAL EUPHONIUM/BARITONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2152. INDIVIDUAL EUPHONIUM/BARITONE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2155. INDIVIDUAL TUBA
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2156. INDIVIDUAL TUBA
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2159. INDIVIDUAL PERCUSSION
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2160. INDIVIDUAL PERCUSSION
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2163. INDIVIDUAL GUITAR
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2164. INDIVIDUAL GUITAR
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2167. INDIVIDUAL ORGAN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2168. INDIVIDUAL ORGAN
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2171. INDIVIDUAL PIANO
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: MUAP 2170 with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 2172. INDIVIDUAL PIANO
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: MUAP 2171 with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 2183. INDIVIDUAL VOICE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2184. INDIVIDUAL VOICE
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2187. IMPROVISATION
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2188. IMPROVISATION
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2203. INDIVIDUAL VIOLIN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2204. INDIVIDUAL VIOLIN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2207. INDIVIDUAL VIOLA
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2208. INDIVIDUAL VIOLA
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2211. INDIVIDUAL CELLO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2212. INDIVIDUAL CELLO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2215. INDIVIDUAL BASS VIOLIN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2216. INDIVIDUAL BASS VIOLIN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2219. INDIVIDUAL FLUTE/PICCOLO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2220. INDIVIDUAL FLUTE/PICCOLO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2223. INDIVIDUAL OBOE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2224. INDIVIDUAL OBOE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2227. INDIVIDUAL BASSOON
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2228. INDIVIDUAL BASSOON
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2231. INDIVIDUAL CLARINET
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2232. INDIVIDUAL CLARINET
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2235. INDIVIDUAL SAXOPHONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2236. INDIVIDUAL SAXOPHONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2239. INDIVIDUAL TRUMPET
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2240. INDIVIDUAL TRUMPET
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2243. INDIVIDUAL FRENCH HORN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2244. INDIVIDUAL FRENCH HORN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2247. INDIVIDUAL TROMBONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2248. INDIVIDUAL TROMBONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2251. INDIVIDUAL EUPHONIUM/BARITONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2252. INDIVIDUAL EUPHONIUM/BARITONE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2255. INDIVIDUAL TUBA
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2256. INDIVIDUAL TUBA
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2259. INDIVIDUAL PERCUSSION
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2260. INDIVIDUAL PERCUSSION
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2263. INDIVIDUAL GUITAR
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2264. INDIVIDUAL GUITAR
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2267. INDIVIDUAL ORGAN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2268. INDIVIDUAL ORGAN
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2271. INDIVIDUAL PIANO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: MUAP 1270 with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 2272. INDIVIDUAL PIANO
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Prerequisite: MUAP 2271 with a grade of "C" or better. Private instruction is an academic transfer course.

MUAP 2283. INDIVIDUAL VOICE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2284. INDIVIDUAL VOICE
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2287. INDIVIDUAL IMPROVISATION III
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUAP 2288. INDIVIDUAL IMPROVISATION IV
(LECTURE 2, LAB 0). CREDIT 2. ACGM.
Private instruction on instruments and in voice is available to students majoring or minoring in music, and to other students who desire to gain or improve proficiency in voice or some instrument. Students must have their own instrument. Private instruction is an academic transfer course.

MUEN 1121. CONCERT BAND
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students; previous concert band experience is helpful. Students should have an instrument. Music will consist of standard literature for concert band in various styles. The availability of the concert band depends on appropriate instrumentation. Concerts will be scheduled when appropriate.

MUEN 1122. CONCERT BAND
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students; previous concert band experience is helpful. Students should have an instrument. Music will consist of standard literature for concert band in various styles. The availability of the concert band depends on appropriate instrumentation. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1121 with a grade of "C" or better.

MUEN 1125. JAZZ ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. Previous Jazz Ensemble experience is helpful. The group will perform various styles of Jazz literature; concerts will be scheduled when appropriate.

MUEN 1126. JAZZ ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. Previous Jazz Ensemble experience is helpful. The group will perform various styles of Jazz literature; concerts will be scheduled when appropriate. Prerequisite: MUEN 1125 with a grade of "C" or better.

MUEN 1131. MIXED CHAMBER ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students with music reading ability. Music will be chosen according to the instrumentation. Group size depends on instrumentation (i.e., violin, viola, piano). Concerts will be scheduled when appropriate.

MUEN 1132. MIXED CHAMBER ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Music will be chosen according to the instrumentation. Group size depends on instrumentation (i.e., violin, viola, piano). Concerts will be scheduled when appropriate. Prerequisite: MUEN 1131 with a grade of "C" or better.

MUEN 1133. WOODWIND ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Student should have an instrument. Music will consist of various woodwind styles: Baroque, classical, romantic, contemporary, etc. The availability of the woodwind ensemble depends on appropriate instrumentation. Group size depends on instrumentation. Concerts will be scheduled when appropriate.

MUEN 1134. BRASS GUILD
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. Music will consist of various brass styles: Baroque, classical, romantic, contemporary, etc. Group size depends on instrumentation. Concerts will be scheduled when appropriate.

MUEN 1135. JAZZ COMBO
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. The group will perform various styles of Jazz literature set for combo. Instrumentation will vary. Concerts will be scheduled when appropriate.

MUEN 1136. JAZZ COMBO
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. The group will perform various styles of Jazz literature set for combo. Instrumentation will vary. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1135 with a grade of "C" or better.

MUEN 1138. PERCUSSION ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Some instruments will be provided. Music will consist of standard literature for percussion ensembles in various styles. The availability of the percussion ensemble depends on appropriate instrumentation. Concerts will be scheduled when appropriate.

MUEN 1139. GUITAR ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment open to all students. Students should have their own guitar. The group provides a unique ensemble experience. The literature is drawn from classical transcriptions to modern compositions written specifically for this group. The group has also performed music drawn from instrumental rock and heavy metal stylings. Students need to own their own guitar and must be able to read music. Concerts will be scheduled per semester including our popular Monster Musik concert in October.

MUEN 1140. GUITAR ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment open to all students. Students should have their own guitar. The group provides a unique ensemble experience. The literature is drawn from classical transcriptions to modern compositions written specifically for this group. The group has also performed music drawn from instrumental rock and heavy metal stylings. Students need to own their own guitar and must be able to read music. Concerts will be scheduled per semester including our popular Monster Musik concert in October. Prerequisite: MUEN 1139 with a grade of "C" or better.

MUEN 1141. MAINLAND CHORALE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Previous experience in a choral ensemble is helpful, but not necessary. The group performs a wide variety of choral literature, ranging from music of the renaissance to contemporary styles. The course is designed to provide the student with a variety of choral works. Concerts will be scheduled when appropriate.

MUEN 1142. MAINLAND CHORALE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Previous experience in a choral ensemble is helpful, but not necessary. The group performs a wide variety of choral literature, ranging from music of the renaissance to contemporary styles. The course is designed to provide the student with a variety of choral works. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1141 with a grade of "C" or better.

MUEN 1153. DUCK & COVER A CAPPELLA
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
The Duck & Cover A Cappella is a select group of singers performing Broadway and vocal Jazz styles of music. Concerts will be scheduled when appropriate.

MUEN 1154. DUCK & COVER A CAPPELLA
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
The Duck & Cover A Cappella is a select group of singers performing Broadway and vocal Jazz styles of music. Concerts will be scheduled when appropriate. Prerequisites: MUEN 1153 with a grade of "C" or better.

MUEN 1155. MEN'S VOCAL ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students who possess a tenor, baritone, or bass vocal range. Previous experience in a men's or mixed choral ensemble is helpful, but not necessary. The availability of this ensemble depends on appropriate number of singers. The ensemble performs a wide variety of literature for male chorus, from music of the renaissance to contemporary, sea chanty, and barbershop styles. Concerts are scheduled when appropriate.

MUEN 1156. MEN'S VOCAL ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students who possess a tenor, baritone, or bass vocal range. Previous experience in a men's or mixed choral ensemble is helpful, but not necessary. The availability of this ensemble depends on appropriate number of singers. The ensemble performs a wide variety of literature for male chorus, from music of the renaissance to contemporary, sea chanty, and barbershop styles. Concerts are scheduled when appropriate. Prerequisite: MUEN 1155 with a grade of "C" or better.

MUEN 2121. CONCERT BAND
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students; previous concert band experience is helpful. Students should have an instrument. Music will consist of standard literature for concert band in various styles. The availability of the concert band depends on appropriate instrumentation. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1122 with a grade of "C" or better.

MUEN 2122. CONCERT BAND
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students; previous concert band experience is helpful. Students should have an instrument. Music will consist of standard literature for concert band in various styles. The availability of the concert band depends on appropriate instrumentation. Concerts will be scheduled when appropriate. Prerequisite: MUEN 2121 with a grade of "C" or better.

MUEN 2125. JAZZ ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. Previous Jazz Ensemble experience is helpful. The group will perform various styles of Jazz literature; concerts will be scheduled when appropriate. Prerequisite: MUEN 1126 with a grade of "C" or better.

MUEN 2126. JAZZ ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. Previous Jazz Ensemble experience is helpful. The group will perform various styles of Jazz literature; concerts will be scheduled when appropriate. Prerequisite: MUEN 2125 with a grade of "C" or better.

MUEN 2131. MIXED CHAMBER ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Music will be chosen according to the instrumentation. Group size depends on instrumentation (i.e., violin, viola, piano). Concerts will be scheduled when appropriate. Prerequisite: MUEN 1132 with a grade of "C" or better.

MUEN 2132. MIXED CHAMBER ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Music will be chosen according to the instrumentation. Group size depends on instrumentation (i.e., violin, viola, piano). Concerts will be scheduled when appropriate. Prerequisite: MUEN 2131 with a grade of "C" or better.

MUEN 2133. WOODWIND ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Student should have an instrument. Music will consist of various woodwind styles: Baroque, classical, romantic, contemporary, etc. The availability of the woodwind ensemble depends on appropriate instrumentation. Group size depends on instrumentation. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1133 with a grade of "C" or better.

MUEN 2134. BRASS GUILD
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. Music will consist of various brass styles: Baroque, classical, romantic, contemporary, etc. Group size depends on instrumentation. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1134 with a grade of "C" or better.

MUEN 2135. JAZZ COMBO
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. The group will perform various styles of Jazz literature set for combo. Instrumentation will vary. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1136 with a grade of "C" or better.

MUEN 2136. JAZZ COMBO
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Students should have an instrument. The group will perform various styles of Jazz literature set for combo. Instrumentation will vary. Concerts will be scheduled when appropriate. Prerequisite: MUEN 2135 with a grade of "C" or better.

MUEN 2138. PERCUSSION ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Some instruments will be provided. Music will consist of standard literature for percussion ensembles in various styles. The availability of the percussion ensemble depends on appropriate instrumentation. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1138 with a grade of "C" or better.

MUEN 2139. GUITAR ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment open to all students. Students should have their own guitar. The group provides a unique ensemble experience. The literature is drawn from classical transcriptions to modern compositions written specifically for this group. The group has also performed music drawn from instrumental rock and heavy metal stylings. Concerts will be scheduled per semester including our popular Monster Musik concert in October. Prerequisite: MUEN 1140 with a grade of "C" or better.

MUEN 2140. GUITAR ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment open to all students. Students should have their own guitar. The group provides a unique ensemble experience. The literature is drawn from classical transcriptions to modern compositions written specifically for this group. The group has also performed music drawn from instrumental rock and heavy metal stylings. Concerts will be scheduled per semester including our popular Monster Musik concert in October. Prerequisite: MUEN 2139 with a grade of "C" or better.

MUEN 2141. MAINLAND CHORALE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Previous experience in a choral ensemble is helpful, but not necessary. The group performs a wide variety of choral literature, ranging from music of the renaissance to contemporary styles. The course is designed to provide the student with a variety of choral works. Concerts will be scheduled when appropriate. Prerequisite: MUEN 1142 with a grade of "C" or better.

MUEN 2142. MAINLAND CHORALE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students. Previous experience in a choral ensemble is helpful, but not necessary. The group performs a wide variety of choral literature, ranging from music of the renaissance to contemporary styles. The course is designed to provide the student with a variety of choral works. Concerts will be scheduled when appropriate. Prerequisite: MUEN 2141 with a grade of "C" or better.

MUEN 2153. DUCK & COVER A CAPPELLA
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
The Duck & Cover A Cappella is a select group of singers performing Broadway and vocal Jazz styles of music. Concerts will be scheduled when appropriate. Prerequisites: MUEN 1154 with a grade of "C" or better.

MUEN 2154. DUCK & COVER A CAPPELLA
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
The Duck & Cover A Cappella is a select group of singers performing Broadway and vocal Jazz styles of music. Concerts will be scheduled when appropriate. Prerequisites: MUEN 2153 with a grade of "C" or better.

MUEN 2155. MEN'S VOCAL ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students who possess a tenor, baritone, or bass vocal range. Previous experience in a men's or mixed choral ensemble is helpful, but not necessary. The availability of this ensemble depends on appropriate number of singers. The ensemble performs a wide variety of literature for male chorus, from music of the renaissance to contemporary, sea chanty, and barbershop styles. Concerts are scheduled when appropriate. Prerequisite: MUEN 1156 with a grade of "C" or better.

MUEN 2156. MEN'S VOCAL ENSEMBLE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Enrollment is open to all students who possess a tenor, baritone, or bass vocal range. Previous experience in a men's or mixed choral ensemble is helpful, but not necessary. The availability of this ensemble depends on appropriate number of singers. The ensemble performs a wide variety of literature for male chorus, from music of the renaissance to contemporary, sea chanty, and barbershop styles. Concerts are scheduled when appropriate. Prerequisite: MUEN 2155 with a grade of "C" or better.

MUSI 1116. SIGHT SINGING & EAR TRAINING I
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
This course is required for music majors. Singing tonal music in treble and bass clefs, and aural study of elements of music, such as scales, intervals and chords, and dictation of basic rhythm, melody and diatonic harmony. Concurrent enrollment in MUSI 1311 is required.

MUSI 1117. SIGHT SINGING & EAR TRAINING II
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
This course is required for music majors. Singing tonal music in various clefs, continued aural study of the elements of music, and dictation of intermediate rhythm, melody and diatonic harmony. Concurrent enrollment in MUSI 1312 is required. Prerequisite: MUSI 1116 with a grade of "C" or better.

MUSI 1157. OPERA WORKSHOP I
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
A study of the synthesis of singing and acting through the performance of opera. This course offers practical experience in producing portions of or complete operas including music, acting, and staging. The availability of this ensemble depends on appropriate number of students.

MUSI 1181. CLASS PIANO I
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Beginning class instruction in the fundamentals of keyboard technique. Class piano is for the student including music majors with little or no prior experience and is recommended prior to individual piano instruction.

MUSI 1182. CLASS PIANO II
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Advanced beginning class instruction in the fundamentals of keyboard technique. This class is for the second semester piano student including music majors. Prerequisite: MUSI 1181 with a grade of "C" or better.

MUSI 1183. CLASS VOICE
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Class instruction in the fundamentals of singing including breathing, tone production, and diction. Does not apply to a music major degree. Designed for students with little or no previous voice training that want to improve their singing voice. Class voice is recommended prior to individual voice instruction.

MUSI 1192. CLASS GUITAR
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Class instruction in fundamental guitar playing, including technique, music-reading, fretboard theory, melodic and harmonic realizations. Designed for the guitar student with little or no prior experience. Students should have an instrument: electric or acoustical guitar acceptable. Class guitar is recommended prior to individual guitar instruction.

MUSI 1303. FUNDAMENTALS OF MUSIC
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Introduction to the basic elements of music theory, including scales, intervals, keys, triads, elementary ear training, notation, meter, and rhythm. Course does not apply to a music major degree. No previous musical knowledge is needed. Course is open to all students. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

MUSI 1306. MUSIC APPRECIATION
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Understanding music through the study of cultural periods, major composers, and musical elements, illustrated with audio recordings and live performances. Course does not apply to a music major degree. This course, which meets the College's fine arts core requirement is designed for students with no previous training in music that wish to explore the meaning and forms of music: classical, romantic, contemporary, jazz, folk, pop. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

MUSI 1307. MUSIC LITERATURE
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A survey of the styles and forms of music as it developed from the middle ages to the present. This course will familiarize the student with cultural context, terminology, genres, and notation. May be used for fine arts credit. Prerequisite: Eligible for ENGL 1301.

MUSI 1310. AMERICAN MUSIC
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A general survey of various styles of music of the Americas, including but not limited to jazz, folk, rock, and contemporary music. This course which meets the college's fine arts core requirement is open to all students. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

MUSI 1311. MUSIC THEORY I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
The study of analysis and writing of tonal melody and diatonic harmony, including fundamental music concepts, scales, intervals, chords, 7th chords, and early four-part writing. Analysis of small compositional forms. Optional correlated study at the keyboard. This course is required for music majors. Concurrent enrollment in MUSI 1116 is required. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

MUSI 1312. MUSIC THEORY II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course is required for music majors. The study of analysis and writing of tonal melody and diatonic harmony, including all diatonic chords and seventh chords in root position and inversions, non-chord tones, and functional harmony. Introduction to more complex topics, such as modulation, may occur. Optional correlated study at the keyboard. Concurrent enrollment in MUSI 1117 is required. Prerequisite: MUSI 1311 with a grade of "C" or better.

MUSI 2116. SIGHT SINGING & EAR TRAINING III
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
This course is required for music majors. Singing more difficult tonal music in various clefs, aural study including dictation of more complex rhythm, melody, chromatic harmony, and extended tertian structures. Concurrent enrollment in MUSI 2311 is required. Prerequisite: MUSI 1117 with a grade of "C" or better.

MUSI 2117. SIGHT SINGING & EAR TRAINING IV
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
This course is required for music majors. Singing advanced tonal music and introduction of modal and post-tonal melodies. Aural study including dictation of advanced rhythm, melody, and harmony. Concurrent enrollment in MUSI 2312 is required. Prerequisite: MUSI 2116 with a grade of "C" or better.

MUSI 2181. CLASS PIANO III
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Intermediate class instruction of keyboard technique. This class is for the third semester piano student including music majors. Prerequisite: MUSI 1182 with a grade of "C" or better.

MUSI 2182. CLASS PIANO IV
(LECTURE 0, LAB 3). CREDIT 1. ACGM.
Advanced class instruction of keyboard technique. This class is for the fourth semester piano student including music majors. Prerequisite: MUSI 2181 with a grade of "C" or better.

MUSI 2311. MUSIC THEORY III
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course is required for music majors. Advanced harmony voice leading, score analysis and writing of more advanced tonal harmony including chromaticism and extended-tertian structures. Optional correlated study at the keyboard. Concurrent enrollment in MUSI 2116 is required. Prerequisite: MUSI 1312 with a grade of "C" or better.

MUSI 2312. MUSIC THEORY IV
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course is required for music majors. Continuation of advanced chromaticism and survey of analytical and compositional procedures in post-tonal music. Optional correlated study at the keyboard. Concurrent enrollment in MUSI 2117 is required. Prerequisite: MUSI 2311 with a grade of "C" or better.

NURS 3244. ISSUES & TRENDS IN NURSING
(LECTURE 2, LAB 0). CREDIT 2. UDCM.
This course provides registered nurses with an overview of the evolution of nursing as a profession. Examine changes in the U.S. healthcare delivery system, the importance of information technology, and measures that promote quality, safety, and better health outcomes in patient care. Consider major issues and trends in contemporary nursing and healthcare practice, including the influence of socioeconomic, ethical, legal, and political variables and professional values.

NURS 3350. TRAN TO BACCALAUREATE NURSING
(LECTURE 3, LAB 0). CREDIT 3. UDCM.
Synthesis of previous knowledge and skills provide the foundation for development of the baccalaureate prepared nursing roles as a provider of patient centered care, patient safety advocate, member of the interdisciplinary team, and member of the profession. Discussion includes examination of historical aspects of healthcare and nursing as a profession, analysis of nursing theory, application of clinical judgment, legal and ethical standards, professionalism, teamwork, and collaboration.

NURS 3351. RESEARCH & EVIDENCE-BASED NURSING PRACTICE
(LECTURE 3, LAB 0). CREDIT 3. UDCM.
Scholarly exchange prepares the baccalaureate nurse to understand the language of research and the scientific process through evaluation of quantitative, qualitative, and mixed method research methodology as a foundation for evidence-based practice in the healthcare setting. This course will investigate research methods and findings and promote appraisal skills to support evidence-based, patient-centered care, quality improvement, and safety outcomes. Prerequisite: NURS 3350, NURS 3353 and NURS 3354 with a grade of "C" or better.

NURS 3352. HEALTH ASSESS ACROSS LIFESPAN (BSN)
(LECTURE 3, LAB 0). CREDIT 3. UDCM.
This course focuses on comprehensive health assessment needs across the lifespan of the individual as a member of the family, community, population, and environment. Content includes access to healthcare, genomics, and traditional and complementary healthcare practices.

NURS 3353. INFORMATICS & TECHNOLOGY IN HEALTHCARE
(LECTURE 3, LAB 0). CREDIT 3. UDCM.
This course establishes the role of electronic information infrastructure in the delivery of care within the institution and inter-disciplinary care team. Focus of this course includes the utilization of informatics to access data to enhance quality and continuity of care in a variety of healthcare settings.

NURS 3354. LEGAL & ETHICAL ISSUES IN HEALTHCARE
(LECTURE 3, LAB 0). CREDIT 3. UDCM.
This course discusses the application of law and ethical principles related to the practice of nursing in differing areas of practice.

NURS 4161. LEADERSHIP AND MANAGEMENT CLINICAL
(LECTURE 0, CLIN 3). CREDIT 1. UDCM.
This course provides a health-related work-based learning experience in a variety of settings that allow the student to apply theories, skills, and concepts related to the role of nursing leader and manager. Prerequisites: NURS 3351, NURS 3353 and NURS 3354 with a grade of "C" or better. Co-requisite: NURS 4457.

NURS 4341. HEALTH PROMOTION ACROSS THE LIFESPAN (BSN)
(LECTURE 3, LAB 0). CREDIT 3. UDCM.
This course introduces the registered nurse to the concept of wellness across the lifespan. Students will examine the concepts of health and wellness, the determinants of health behavior, national health status, the history of health education and health promotion. The student will recognize health promotion as an important foundation for population-based health care. Prerequisite: NURS 3352 with a grade of "C" or better.

NURS 4358. PUBLIC & GLOBAL HEALTH POLICY
(LECTURE 3, LAB 0). CREDIT 3. UDCM.
This course explores the policies that influence healthcare in the U.S. and global healthcare delivery systems. Topics include healthcare policy development, quality assurance and quality improvement, legislative advocacy, disaster preparedness, bioterrorism, emerging infectious diseases, environmental health, levels of prevention, and the national health initiatives.

NURS 4433. POPULATION FOCUSED COMMUNITY HEALTH
(LECTURE 3, LAB 4). CREDIT 4. UDCM.
This combined theory and clinical course will explore the role of the community/public health nurse caring for individuals, families, communities, and populations through designing, implementing, and evaluating population-based interventions that promote the health of a community and its members. Emphasis is given to health promotion and disease/injury prevention within vulnerable and at-risk populations and minimizing health consequences of emergency and disaster situations. Entry-level competencies for public health nurses are developed through diverse clinical experiences in virtual and real-world settings.

NURS 4457. LEADERSHIP & MANAGEMENT
(LECTURE 4, LAB 0). CREDIT 4. UDCM.
This course explores leadership and management theories, resource allocation, the nurse as a change agent, member of the profession, communication, and quality improvement in the healthcare setting. Prerequisites: NURS 3351, NURS 3353 and NURS 3354 with a grade of "C" or better. Co-requisite: NURS 4161.

OSHT 1301. INTRODUCTION TO SAFETY AND HEALTH
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This is an introductory course identifying appropriate procedures to minimize or eliminate injuries and illness in the workplace, incorporate job safety analysis (JSA) and appropriate training, and name elements of an effective safety culture.

OSHT 1305. OSHA REGULATIONS - CONSTRUCTION INDUSTRY
(LECTURE 3, LAB 0). CREDIT 3. WECM.
A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry.

OSHT 1309. PHYSICAL HAZARDS CONTROL
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course provides a study of the physical hazards in industry and the methods of workplace design and redesign to control these hazards. Emphasis is placed on the regulation codes and standards associated with the control of physical hazards.

OSHT 1313. ACCIDENT PREVENTION, INSPECTION AND INVESTIGATION
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course provides a basis for understanding the nature of occupational hazard recognition, accident prevention, loss reduction, inspection techniques, and accident investigation analysis.

OSHT 1321. FIRE PROTECTION SYSTEMS
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This is a study of fire protection systems and their applications with emphasis on the fire prevention codes and standards.

OSHT 2305. ERGONOMICS AND HUMAN FACTORS IN SAFETY
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course provides an in-depth study of the relationship of human behavior and ergonomics as applied to workplace safety.

OSHT 2309. SAFETY PROGRAM MANAGEMENT
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course examines the major safety management issues that affect the workplace including safety awareness, loss control, regulatory issues and human behavior modification. This course provides the student with a learning experience that results in consolidation and synthesis of the program competencies. (Capstone course: Take in last semester or faculty approved.)

OSHT 2401. OSHA REGULATIONS - GENERAL INDUSTRY
(LECTURE 4, LAB 0). CREDIT 4. WECM.
A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to general industry.

PHED 1110. WEIGHT TRAINING
(LECTURE 1, LAB 2). CREDIT 1. ACGM.
This course is for both men and women and is designed to aid them in improving their muscle tone or increasing muscular strength and endurance. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 1111. HATHA YOGA
(LECTURE 1, LAB 2). CREDIT 1. ACGM.
This is an introduction to basic yoga postures, breathing, and relaxation techniques with emphasis on physical practice. Students will be provided with an opportunity to strengthen, tone and firm muscles. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 1112. WEIGHT CONTROL
(LECTURE 1, LAB 2). CREDIT 1. ACGM.
Participants will engage in a modern system of behavior modification techniques through an individualized weight loss or weight maintenance program. A redirecting of eating habits, individually designed eating plans, nutrition and consumer-related topics will be included in class discussions and lectures. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 1133. INTRODUCTION TO RECREATIONAL SPORTS - PICKLEBALL (LECTURE 1, LAB 2). CREDIT 1. ACGM.
This course will focus on the recreational sport of Pickleball. It will emphasize skill development, including serving, volleying and scoring, physical fitness, and the enjoyment of recreational play. The course will provide an overview of the rules, court layout, equipment, strategy, and game play of Pickleball. It is ideal for beginner and intermediate players. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 1143. AEROBIC - RUN/WALK
(LECTURE 1, LAB 2). CREDIT 1. ACGM.
This class is intended for the beginning, intermediate, or advance walkers/runners who would like to improve distance or speed. It will also allow the walker/runner to train with a group twice a week. Topics to be included are sports nutrition, sport psychology, fitness testing, training schedules, speed work, stretching, and racing strategies. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 1145. AEROBIC - CROSS-TRAINING
(LECTURE 1, LAB 2). CREDIT 1. ACGM.
Students will be provided with an opportunity to strengthen their cardio respiratory system, decrease percent body fat, tone and firm muscles while performing aerobic exercise. This course is designed to increase energy, mental clarity and health as a part of one's lifestyle. The class will incorporate high and low impact movements, bench-step, kickboxing, circuit aerobics, body sculpting and flexibility training. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay or equivalent developmental course with a grade of "C" or better.

PHED 1146. AEROBIC - KICKBOXING
(LECTURE 1, LAB 2). CREDIT 1. ACGM.
Students will be provided with an opportunity to strengthen their cardio respiratory system, decrease percent body fat, tone and firm muscles while utilizing aerobic/boxing techniques to music. Beginning, intermediate and advanced techniques with emphasis on cardiovascular endurance utilizing kickboxing moves that increase the heart rate to each individual's target zone. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 1164. INTRODUCTION TO PHYSICAL FITNESS AND WELLNESS
(LECTURE 1, LAB 2). CREDIT 1. ACGM.
This course will provide an overview of the lifestyle necessary for fitness and health. Students will participate in physical activities and assess their fitness status. Students will be introduced to proper nutrition, weight management, cardiovascular health, flexibility, and strength training. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 1304. PERSONAL/COMMUNITY HEALTH
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course provides an introduction to the fundamentals, concepts, strategies, applications, and contemporary trends related to understanding personal and/or community health issues. This course also focuses on empowering various populations with the ability to practice healthy living, promote healthy lifestyles, and enhance individual well-being. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

PHED 1306. FIRST AID
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course teaches introductory aspects of emergency care for the sick and injured, emphasizing principles and concepts for dealing intelligently with emergencies; includes instruction on cardiopulmonary resuscitation. Red Cross certification is available upon successful completion of course. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

PHED 2110. TEAM GAMES AND SPORTS
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Practice-based instruction, skill learning, demonstration, rules, and organization of various team sports used to promote activity in secondary physical education classes. Prerequisite: TSIA2 ELAR <945 with Diagnostic5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 2113. INDIVIDUAL GAMES AND SPORTS
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Practice-based instruction, skill learning, demonstration, rules, and organization of various individual sports used to promote activity in secondary physical education classes. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHED 2115. INNOVATIVE GAMES AND SPORTS
(LECTURE 1, LAB 0). CREDIT 1. ACGM.
Practice-based instruction, skill learning, demonstration, rules, and organization of various innovative games sports used to promote activity in secondary physical education classes. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better.

PHIL 1301. INTRODUCTION TO PHILOSOPHY
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A study of major issues in philosophy and/or the work of major philosophical figures in philosophy. Topics in philosophy may include theories of reality, theories of knowledge, theories of value, and their practical applications. Prerequisite: ENGL 1301 with a grade of "C" or better.

PHIL 1304. INTRODUCTION TO WORLD RELIGIONS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A comparative study of world religions, including but not limited to Hinduism, Buddhism, Judaism, Christianity, and Islam. Prerequisite: ENGL 1301 with a grade of "C" or better.

PHIL 2306. INTRODUCTION TO ETHICS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
The systematic evaluation of classical and/or contemporary ethical theories concerning the good life, human conduct in society, morals, and standards of value. Prerequisite: ENGL 1301 with a grade of "C" or better.

PHRA 1243. PHARMACY TECHNICIAN CERTIFICATION REVIEW
(LECTURE 2, LAB 0). CREDIT 2. WECM.
An overview of major topics covered on the National Pharmacy Technician Certification Exam.

PHRA 1301. INTRODUCTION TO PHARMACY
(LECTURE 3, LAB 1). CREDIT 3. WECM.
This course is an overview of the qualifications, operational guidelines, and job duties of the pharmacy technician.

PHRA 1309. PHARMACEUTICAL MATH I
(LECTURE 3, LAB 1). CREDIT 3. WECM.
This course covers pharmaceutical calculation problems encountered in the preparation and distribution of drugs.

PHRA 1347. PHARMACEUTICAL MATH II
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course will cover advanced concepts of Pharmaceutical Math I. Prerequisite: PHRA 1309 with a grade of "C" or better.

PHRA 1404. PHARMACOTHERAPY AND DISEASE PROCESS
(LECTURE 4, LAB 0). CREDIT 4. WECM.
This course is the study of disease states and the therapeutic properties of drugs used in pharmaceutical therapy. Prerequisite: PHRA 1441 with a grade of "C" or better.

PHRA 1441. PHARMACY DRUG THERAPY AND TREATMENT
(LECTURE 4, LAB 1). CREDIT 4. WECM.
This course represents the study of therapeutic agents, their classifications, properties, actions, and effects on the human body and their role in the management of disease.

PHRA 1445. COMPOUNDING STERILE PREPARATIONS
(LECTURE 3, LAB 2). CREDIT 4. WECM.
This course is a study of the process of compounding sterile preparations and aseptic technique within legal and regulatory guidelines specified by USP <797> standards.

PHRA 1449. INSTITUTIONAL PHARMACY PRACTICE
(LECTURE 3, LAB 3). CREDIT 4. WECM.
This course covers the fundamentals of the diverse roles and practice of pharmacy technicians in an institutional pharmacy setting. Topics will include in-depth coverage of hospital pharmacy organization, work flow and personnel, safety techniques, data entry, packaging and labeling operations, inpatient drug distribution systems including investigational drugs, continuous quality improvement and inventory control.

PHRA 2360. CLINICAL - PHARMACY TECHNICIAN/ASSISTANT
(LECTURE 0, CLIN 10). CREDIT 3. WECM.
This course consists of health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prerequisites: PHRA 1301, PHRA 1441, PHRA 1449, PHRA 1309 with a grade of "C" or better.

PHYS 1401. COLLEGE PHYSICS I
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Fundamental principles of physics, using algebra and trigonometry; the principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces; with emphasis on problem solving. For pre-medical, pre-dental, pre-physical therapy, pre-veterinary medicine, pre-pharmacy, pre-optometry and technology students. Prerequisites: MATH 1314 and MATH 1316 or MATH 2312/2412 with a grade of "C" or better. Prior physics strongly recommended.

PHYS 1402. COLLEGE PHYSICS II
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Fundamental principles of physics, using algebra and trigonometry; the principles and applications of electricity and magnetism, including circuits, electrostatics, electromagnetism, waves, sound, light, optics, and modern physics topics; with emphasis on problem solving. Prerequisite: PHYS 1401 with a grade of "C" or better.

PHYS 1410. APPLIED PHYSICS
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
This is a one-semester, non-calculus approach to the principles of force and motion, work and energy, fluids, heat and thermodynamics. The course is intended for students of process technology and other technical students. The concepts of fluids, heat and thermodynamics are emphasized. Prerequisites: TECM 1343 or MATH 1314 with a grade of "C" or better.

PHYS 2425. UNIVERSITY PHYSICS I
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Fundamental principles of physics, using calculus, for science, computer science, and engineering majors; the principles and applications of classical mechanics, including harmonic motion, physical systems and thermodynamics; and emphasis on problem solving. Prerequisite: MATH 2413 with a grade of "C" or better. This is an academic transfer course.

PHYS 2426. UNIVERSITY PHYSICS II
(LECTURE 3, LAB 3). CREDIT 4. ACGM.
Principles of physics for science, computer science, and engineering majors, using calculus, involving the principles of electricity and magnetism, including circuits, electromagnetism, waves, sound, light, and optics. Prerequisites: PHYS 2425 and MATH 2414 with a grade of "C" or better.

POFT 1300. CAREER EXPLORATION/PLANNING
(LECTURE 3, LAB 0). CREDIT 3. WECM.
An introduction to career exploration, educational planning, and job searching. Offered spring only.

POFT 1321. BUSINESS MATH
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Fundamentals of business mathematics including analytical and problem solving skills for critical thinking skills.

PSTR 1301. FUNDAMENTALS OF BAKING
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Fundamentals of baking including dough, quick breads, pies, cakes, cookies, and tarts. Instruction in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and the evaluation of baked products. Prerequisites: CHEF 1205 and CHEF 1301 with a grade of "C" or better.

PSTR 2331. ADVANCED PASTRY SHOP
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Skill development for culinary competition by offering advanced experience in salon presentations. A study of classical desserts, French and international pastries, hot and cold desserts, ice creams and ices, chocolate work, and decorations. Emphasis on advanced techniques.

PSYC 1300. PSYCHOLOGY FOR SUCCESS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A study of the psychology of learning, cognition and motivation; factors that impact life-long learning; and application of learning strategies in college, career and daily life. Prerequisite: TSIA2 ELAR <945 with Diagnostic 5-6 and Essay 0-4, <945 with Diagnostic 4 and Essay 0-8, or >945 with Essay 0-4, or equivalent developmental course with a grade of "C" or better. Credit will not be given for both PSYC 1300 and EDUC 1300. This is an academic transfer course.

PSYC 2301. GENERAL PSYCHOLOGY
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
General Psychology is a survey of the major psychological topics, theories and approaches to the scientific study of behavior and mental processes. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. This is an academic transfer course.

PSYC 2314. LIFESPAN GROWTH & DEVELOPMENT
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Life-Span Growth and Development is a study of social, emotional, cognitive and physical factors and influences of a developing human from conception to death. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. This is an academic transfer course.

PSYC 2317. STATISTICAL METHODS IN PSYCHOLOGY
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
This course covers descriptive and inferential statistics used in psychological research and assessment. It includes measurement, characteristics of distributions; measures of central tendency and variability; transformed scores; correlation and regression; probability theory; and hypotheses testing and inference. (PSYC 2317 is included in the Psychology Field of Study.) Prerequisite: PSYC 2301 with a grade of "C" or better. Prerequisite: MATH 1314 with a grade of "C" or better. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better. This is an academic transfer course.

PTAC 1302. INTRODUCTION TO PROCESS TECHNOLOGY
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This is the introduction to chemical and refinery plant operations. Topics include process technician duties, responsibilities and expectations; plant organizations; plant process and utility systems; and the physical and mental requirements of the process technician. The student will relate an overview of a typical process plant; identify process equipment; state the purpose of equipment; describe safety, health, and environmental components; and describe the roles, responsibilities, and work environment. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

PTAC 1308. SAFETY, HEALTH, AND ENVIRONMENT I
(LECTURE 3, LAB 1). CREDIT 3. WECM.
This course covers the development of knowledge and skills to reinforce the attitudes and behaviors required for safe and environmentally sound work habits. Emphasis is placed on safety, health, and environmental issues in the performance of all job tasks and regulatory compliance issues. Students will list components of a typical plant safety and environmental program; describe the role of a process technician in relation to safety, health, and environment; and identify and describe safety, health, and environmental equipment uses. Prerequisite: TSIA2 Math Diagnostic 4 or 5.

PTAC 1310. PROCESS TECHNOLOGY I - EQUIPMENT
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This course provides instruction in the use of common process equipment. The student will identify process equipment components; use appropriate terminology to describe components of process equipment; describe basic functions of process equipment; and relate scientific principles associated with process equipment. Prerequisite: PTAC 1302 with a grade of "C" or better. Prerequisite: TSIA2 Math Diagnostic 4 or 5.

PTAC 1332. PROCESS INSTRUMENTATION I
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course is the study of instruments and instrument systems used in chemical processing industry, including terminology, primary variables, symbology, control loops, and basic troubleshooting. Students will identify and explain the function of instruments used in the chemical processing industry; explain the relationship of process control elements in a control loop; and define and apply terms and symbols used in instrumentation. Prerequisite: PTAC 1302 with a grade of "C" or better. Prerequisite: TSIA2 Math Diagnostic 4 or 5.

PTAC 1350. INDUSTRIAL ECONOMICS
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This course is an examination of the profitability factors of plant operations including both personal and business strategies, objectives, and operating profitability. Students will be able to summarize plant operations from a business perspective; explain the impact of operation on profitability; and interpret stock market factors and annual reports. Prerequisites: PTAC 1302 and MATH 1314 with a grade of "C" or better.

PTAC 1354. INDUSTRIAL PROCESSES
(LECTURE 2, LAB 4). CREDIT 3. WECM.
The study of the basic types of industrial processes. Types of commercial processes will be explored and demonstrated. Students will demonstrate knowledge of basic types of industrial processes and their operation; explain chemical, physical and thermodynamic principles of industrial processes; perform calculations on industrial processes; and plot and graph process data. Prerequisites: PTAC 1302, PTAC 1308, PTAC 1310, PTAC 1332, CHEM 1405, and PHYS 1410 or PHYS 1401 with a grade of "C" or better.

PTAC 2314. QUALITY
(LECTURE 3, LAB 0). CREDIT 3. WECM.
This is the study of the background and application of quality concepts. Topics include team skills, quality tools, and economics and continuous improvement. Students will define terms associated with quality systems; demonstrate team skills; and apply principles and tools of quality to process systems. Prerequisite: TSIA2 Math Diagnostic 4 or 5. Prerequisite: PTAC 1302 with a grade of "C" or better.

PTAC 2346. PROCESS TROUBLESHOOTING
(LECTURE 2, LAB 4). CREDIT 3. WECM.
This course provides instruction in the different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause-effect relationships, and reasoning. Students will explain steps in troubleshooting models; demonstrate use of troubleshooting tools; and apply troubleshooting techniques to process problems. Prerequisites: PTAC 1302, PTAC 1308, PTAC 1310, PTAC 1332, PTAC 2420, CHEM 1405, and PHYS 1410 or PHYS 1401 with a grade of "C" or better.

PTAC 2420. PROCESS TECHNOLOGY II - SYSTEMS
(LECTURE 3, LAB 3). CREDIT 4. WECM.
This is the study of the interrelation of process equipment and process systems including related scientific principles. Students will arrange process equipment into basic systems; describe the purpose and function of specific process systems; explain how factors affecting process systems are controlled under normal conditions; and recognize abnormal process conditions. Prerequisites: PTAC 1302, PTAC 1308, PTAC 1310 and PTAC 1332 with a grade of "C" or better. This is a benchmark course.

PTAC 2438. PROCESS TECHNOLOGY III - OPERATIONS
(LECTURE 3, LAB 3). CREDIT 4. WECM.
This course combines systems into operational processes with emphasis on operations under various conditions. Topics include typical duties of an operator. Students will combine systems into operating processes; describe a process technician's role during plant operations; write operating procedures; and demonstrate application of operating procedures. Prerequisites: PTAC 1302, PTAC 1308, PTAC 1310, PTAC 1332, PTAC 2420, CHEM 1405, and PHYS 1410 or PHYS 1401 with a grade of "C" or better.

RADR 1166. PRACTICUM (OR FIELD EXPERIENCE) - RADIOLOGIC TECHNOLOGY/SCIENCE - RADIOGRAPHER
(LECTURE 0, PRAC 10). CREDIT 1. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: Acceptance into Radiologic Technology Program. Co-requisite: RADR 1411.

RADR 1266. PRACTICUM (OR FIELD EXPERIENCE) - RADIOLOGIC TECHNOLOGY/SCIENCE - RADIOGRAPHER
(LECTURE 0, PRAC 16). CREDIT 2. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: RADR 1166 with a grade of "C" or better. Co-requisite: RADR 2401.

RADR 1309. INTRODUCTION TO RADIOGRAPHY AND PATIENT CARE
(LECTURE 3, LAB 0). CREDIT 3. WECM.
An overview of the historical development of radiography, basic radiation protection, an introduction to medical terminology, ethical and legal issues for health care professionals, and an orientation to the profession and to the health care system. Patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology are also included. Acceptance into Radiologic Technology.

RADR 1313. PRINCIPLES OF RADIOGRAPHIC IMAGING I
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Radiographic image quality and the effects of exposure variables. Prerequisite: RADR 2209 with a grade of "C" or better.

RADR 1411. BASIC RADIOGRAPHIC PROCEDURES
(LECTURE 3, LAB 3). CREDIT 4. WECM.
An introduction to radiographic positioning terminology, manipulation of equipment, positioning and alignment of the anatomic structure and equipment, and evaluation of images for demonstration of basic anatomy. Prerequisite: Acceptance into Radiologic Technology Program. Co-requisite: RADR 1166.

RADR 2209. RADIOGRAPHIC IMAGING EQUIPMENT
(LECTURE 2, LAB 0). CREDIT 2. WECM.
Equipment and physics of x-ray production. Includes basic x-ray circuits. Also examines the relationship of conventional and digital equipment components to the imaging process. Acceptance into Radiologic Technology.

RADR 2217. RADIOGRAPHIC PATHOLOGY
(LECTURE 2, LAB 0). CREDIT 2. WECM.
Disease processes and their appearance on radiographic images. Prerequisite: RADR 1309 with a grade of "C" or better.

RADR 2266. PRACTICUM (OR FIELD EXPERIENCE) - RADIOLOGIC TECHNOLOGY/SCIENCE - RADIOGRAPHER
(LECTURE 0, PRAC 15). CREDIT 2. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: RADR 1266 with a grade of "C" or better.

RADR 2305. PRINCIPLES OF RADIOGRAPHIC IMAGING II
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Radiographic image quality and the effects of exposure variables, and the synthesis of all variables in image production. Prerequisite: RADR 2209 with a grade of "C" or better.

RADR 2313. RADIATION BIOLOGY AND PROTECTION
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Effects of radiation exposure on biological systems. Includes typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure. Prerequisite: RADR 1309 with a grade of "C" or better.

RADR 2331. ADVANCED RADIOGRAPHIC PROCEDURES
(LECTURE 3, LAB 1). CREDIT 3. WECM.
Positioning and alignment of anatomic structures and equipment, evaluation of images for demonstration of anatomy and related pathology. Prerequisite: RADR 2401 with a grade of "C" or better.

RADR 2333. ADVANCED MEDICAL IMAGING
(LECTURE 3, LAB 0). CREDIT 3. WECM.
An exploration of specialized imaging modalities. Prerequisite: RADR-2401 with a grade of "C" or better.

RADR 2335. RADIOLOGIC TECHNOLOGY SEMINAR
(LECTURE 3, LAB 0). CREDIT 3. WECM.
A capstone course focusing on the synthesis of professional knowledge, skills, and attitudes in preparation for professional employment and lifelong learning. Prerequisite: RADR 2401 with a grade of "C" or better.

RADR 2367. PRACTICUM (OR FIELD EXPERIENCE) - RADIOLOGIC TECHNOLOGY/SCIENCE - RADIOGRAPHER
(LECTURE 0, PRAC 24). CREDIT 3. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: RADR 2266 with a grade of "C" or better.

RADR 2368. PRACTICUM (OR FIELD EXPERIENCE) - RADIOLOGIC TECHNOLOGY/SCIENCE - RADIOGRAPHER
(LECTURE 0, PRAC 24). CREDIT 3. WECM.
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. Prerequisite: RADR 2367 with a grade of "C" or better.

RADR 2401. INTERMEDIATE RADIOGRAPHIC PROCEDURES
(LECTURE 3, LAB 3). CREDIT 4. WECM.
A continuation of the study of the manipulation of radiographic equipment, positioning and alignment of the anatomic structure and equipment, and evaluation of images for demonstration of anatomy. Prerequisite: RADR 1411 with a grade of "C" or better. Co-requisite: RADR 1266.

RNSG 1162. COMPLEX CONCEPTS OF ADULT HEALTH CLINICAL
(LECTURE 0, CLIN 6). CREDIT 1. WECM.
Clinical experiences in the management of patients and families with complex health needs. Co-requisite: RNSG 1343.

RNSG 1260. FOUNDATIONS OF NURSING CLINICAL
(LECTURE 0, CLIN 6). CREDIT 2. WECM.
Introductory clinical course designed to provide a beginning level of education and experience in the implementation of direct client care. Emphasis is placed on the provision of basic care to adult clients and families in structured health care settings. Opportunities are provided for the application of theory, concepts and skills being acquired. Co-requisites: RNSG 1331 and RNSG 1413.

RNSG 1261. COMMON CONCEPTS OF ADULT HEALTH CLINICAL
(LECTURE 0, CLIN 6). CREDIT 2. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Co-requisite: RNSG 1341.

RNSG 1263. TRANSITION TO PROFESSIONAL NURSING CLINICAL
(LECTURE 0, CLIN 6). CREDIT 2. WECM.
This course provides clinical experience at medical-surgical facilities that provide opportunities for the vocational nurse to begin the transition to the registered nurse role and function. Opportunities are provided for the application of theory, concepts and skills. Co-requisite: RNSG 1327.

RNSG 1327. TRANSITION TO PROFESSIONAL NURSING
(LECTURE 2, LAB 3). CREDIT 3. WECM.
This bridging course provides the Licensed Vocational Nurse (LVN) an opportunity to enhance his/her theory base and develop skills essential for joining the generic ADN student for the second year of the program. Topics include health promotion, expanded assessment, analysis of data, nursing process, pharmacology, multidisciplinary teamwork, communication and applicable competencies in knowledge, judgment, skills and professional values within a legal/ethical framework throughout the life span. Co-requisite: RNSG 1263.

RNSG 1331. PRINCIPLES OF CLINICAL DECISION-MAKING
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Examination of selected principles related to the continued development of the professional nurse as a provider of patient-centered care, patient safety advocate, member of health care team, and member of the profession. Emphasis on clinical decision making for clients in medical-surgical settings experiencing health problems involving fluid and electrolytes; perioperative care; pain; respiratory disorders; peripheral vascular disorders; immunologic disorders; and infectious disorders. Discussion of knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to either a blocked or integrated approach. Co-requisites: RNSG 1413 and RNSG 1260.

RNSG 1341. COMMON CONCEPTS OF ADULT HEALTH
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Basic integration of the role of the professional nurse as a provider of patient-centered care, patient safety advocate, member of health care team, and member of the profession. Study of the common concepts of caring for adult patients and families with medical-surgical health care needs related to body systems, emphasizing knowledge, judgment, skills, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. Co-requisite: RNSG 1261.

RNSG 1343. COMPLEX CONCEPTS OF ADULT HEALTH
(LECTURE 2, LAB 2). CREDIT 3. WECM.
This course integrates previous knowledge and skills related to complex adult heath needs into the continued development of the professional nurse as provider of patient-centered care, patient safety advocate, member of health care team and member of a profession in the care for adult/families with complex medical-surgical health care needs associated with body systems. Emphasis on knowledge, judgment, skills and professional values within a legal/ethical framework. Co-requisite: RNSG 1162.

RNSG 1412. NURSING CARE OF THE CHILDBEARING AND CHILDREARING FAMILY
(LECTURE 3, LAB 2). CREDIT 4. WECM.
Study of the concepts related to the provision of nursing care for childbearing and childrearing families. Application of systematic problem-solving processes and critical thinking skills, including a focus on the childbearing family during the perinatal periods and the childrearing family from birth to adolescence; and competency in knowledge, judgment, skill, and professional values within a legal/ethical framework. This course lends itself to a blocked approach. Co-requisite: RNSG 2261.

RNSG 1413. FOUNDATIONS FOR NURSING PRACTICE
(LECTURE 3, LAB 2). CREDIT 4. WECM.
Introduction to the role of the professional nurse as provider of patient-centered care, patient safety advocate, member of health care team, and member of the profession. Content includes fundamental concepts of nursing practice, history of professional nursing, and a systematic framework for decision-making and critical thinking. Emphasis on knowledge, judgment, skills and professional values within a legal/ethical framework. This course lends itself to a blocked approach. Co-requisites: RNSG 1331 and RNSG 1260.

RNSG 2161. MENTAL HEALTH NURSING CLINICAL
(LECTURE 0, CLIN 4). CREDIT 1. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professor. Co-requisite: RNSG 2213.

RNSG 2213. MENTAL HEALTH NURSING
(LECTURE 2, LAB 0). CREDIT 2. WECM.
Principles and concepts of mental health, psychopathology and treatment modalities related to the nursing care of patients and their families. Content includes knowledge, judgment, skills and professional values within a legal/ethical framework. Co-requisite: RNSG 2161.

RNSG 2230. PROFESSIONAL NURSING REVIEW AND LICENSURE PREPARATION
(LECTURE 2, LAB 1). CREDIT 2. WECM.
Review of concepts required for licensure examination and entry into the practice of professional nursing. Includes review of application process of National Council Licensure Examination for Registered Nurses (NCLEX-RN) test plan, assessment of knowledge deficits, and remediation. Co-requisites: RNSG 2262 and RNSG 2332.

RNSG 2261. NURSING CARE OF THE CHILDBEARING AND CHILDREARING FAMILY CLINICAL
(LECTURE 0, CLIN 6). CREDIT 2. WECM.
Study of the concepts related to the provision of nursing care for childbearing and childrearing families. Application of systematic problem-solving processes and critical thinking skills, including a focus on the childbearing family during the perinatal periods and the childrearing family from birth to adolescence; and competency in knowledge, judgment, skill, and professional values within a legal/ethical framework. Co-requisite: RNSG 1412.

RNSG 2262. ENHANCED CONCEPTS OF ADULT HEALTH CLINICAL
(LECTURE 0, CLIN 6). CREDIT 2. WECM.
Clinical experiences in the management of patients and families with multiple body system problems. Co-requisites: RNSG 2332 and RNSG 2230.

RNSG 2263. CAPSTONE CLINICAL
(LECTURE 0, CLIN 6). CREDIT 2. WECM.
Nursing care to adult patients and families suffering from multi-system or life-threatening health needs in a medical and/ or surgical acute care setting. Prequisites: RNSG 2332 and RNSG 2262.

RNSG 2332. ENHANCED CONCEPTS OF ADULT HEALTH
(LECTURE 2, LAB 3). CREDIT 3. WECM.
Enhanced concepts and skills for developing professional competencies in complicated nursing care situations involving adult patients/families with multiple body system problems. Emphasizes critical thinking, clinical reasoning, and determining legal/ethical values for optimization of patient care in intermediate and acute care settings. This course lends itself to a blocked approach. Co-requisites: RNSG 2262 and RNSG 2230.

RSTO 1304. DINING ROOM SERVICE
(LECTURE 1, LAB 5). CREDIT 3. WECM.
Introduces the principles, concepts, and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel. Prerequisites: CHEF 1205, CHEF 1301, CHEF 2301 and PSTR 1301 with a grade of "C" or better.

RSTO 1313. HOSPITALITY SUPERVISION
(LECTURE 3, LAB 0). CREDIT 3. WECM.
Fundamentals of recruiting, selection, and training of food service and hospitality personnel. Topics include job descriptions, schedules, work improvement, motivation, applicable personnel laws and regulations. Emphasis on leadership development. Prerequisites: CHEF 1205, CHEF 1301, CHEF 2301 and PSTR 1301 with a grade of "C" or better.

RSTO 2431. FOOD SERVICE MANAGEMENT
(LECTURE 2, LAB 4). CREDIT 4. WECM.
Mastery of actual management experiences in supervision, training, planning, and control of a variety of food service operation formats may include cafeteria, table service, meetings, banquets, and catered events. Prerequisites: PSTR 2331, CHEF 1341, CHEF 1345, CHEF 1314 with a grade of "C" or better.

SGNL 1301. BEGINNING AMERICAN SIGN LANGUAGE I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Introduction to American Sign Language covering finger spelling, vocabulary, and basic sentence structure in preparing individuals to interpret oral speech for the hearing impaired.

SGNL 1302. BEGINNING AMERICAN SIGN LANGUAGE II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Introduction to American Sign Language covering finger spelling, vocabulary, and basic sentence structure in preparing individuals to interpret oral speech for the hearing impaired. Prerequisite: SGNL 1301 with a grade of "C" or better or instructor permission.

SOCI 1301. INTRODUCTION TO SOCIOLOGY
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
The scientific study of human society, including ways in which groups, social institutions, and individuals affect each other. Causes of social stability and social change are explored through the application of various theoretical perspectives, key concepts, and related research methods of sociology. Analysis of social issues in their institutional context may include topics such as social stratification, gender, race/ethnicity, and deviance. Prerequisite: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

SOCI 1306. SOCIAL PROBLEMS
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Application of sociological principles and theoretical perspectives to major social problems in contemporary society such as inequality, crime and violence, substance abuse, environmental issues, deviance, or family problems.

SPAN 1411. BEGINNING SPANISH I
(LECTURE 4, LAB 0). CREDIT 4. ACGM.
Basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students will acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the beginner level.

SPAN 1412. BEGINNING SPANISH II
(LECTURE 4, LAB 0). CREDIT 4. ACGM.
Continued development of basic Spanish language skills in listening, speaking, reading, and writing within a cultural framework. Students acquire the vocabulary and grammatical structures necessary to communicate and comprehend at the high beginner to low intermediate level.

SPAN 2311. INTERMEDIATE SPANISH I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

SPAN 2312. INTERMEDIATE SPANISH II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
The consolidation of skills acquired at the introductory level. Further development of proficiency in listening, speaking, reading and writing. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

SPAN 2313. SPANISH FOR NATIVE/HERITAGE SPEAKERS I
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Builds upon existing oral proficiencies of heritage speakers of Spanish. Enhances proficiencies in the home-based language by developing a full range of registers including public speaking and formal written discourse. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world.

SPAN 2315. SPANISH FOR NATIVE/HERITAGE SPEAKERS II
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Builds upon existing oral proficiencies of heritage speakers of Spanish. Enhances proficiencies in the home-based language by developing a full range of registers including public speaking and formal written discourse. Emphasis on comprehension, appreciation, and interpretation of the cultures of the Spanish-speaking world. Prerequisite: SPAN 2313 with a grade of "C" or better.

SPCH 1315. PUBLIC SPEAKING
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Application of communication theory and practice to the public speaking context, with emphasis on audience analysis, speaker delivery, ethics of communication, cultural diversity, and speech organizational techniques to develop students' speaking abilities, as well as ability to effectively evaluate oral presentations. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

SPCH 1318. INTERPERSONAL COMMUNICATION
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Application of communication theory to interpersonal relationship development, maintenance, and termination in relationship contexts including friendships, romantic partners, families, and relationships with co-workers and supervisors. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

SPCH 1321. BUSINESS & PROFESSIONAL COMMUNICATION
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Study and application of communication within the business and professional context. Special emphasis will be given to communication competencies in presentations, dyads, teams and technologically mediated formats. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

SPCH 1342. VOICE AND DICTION
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Physiology and mechanics of effective voice production with practice in articulation, pronunciation and enunciation. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

SPCH 2335. ARGUMENTATION AND DEBATE
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
Theories and practice in argumentation and debate including analysis, reasoning, organization, evidence and refutation. Prerequisites: TSIA2 945-990 ELAR/CRC test AND 5 or higher on Essay OR 910-944 on CRC with 5-6 on Diagnostic Test + 5 or higher on Essay, or IRW 0320 with a grade of "C" or better.

SRGT 1244. TECHNOLOGICAL SCIENCES FOR THE SURGICAL TECHNOLOGIST
(LECTURE 2, LAB 1). CREDIT 2. WECM.
Specialized surgical modalities covered include endoscopy, microsurgery, therapeutic surgical energies, and other integrated science technologies.

SRGT 1260. CLINICAL - SURGICAL TECHNOLOGY/TECHNOLOGIST
(LECTURE 0, CLIN 8). CREDIT 2. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

SRGT 1360. CLINICAL - SURGICAL TECHNOLOGY/TECHNOLOGIST
(LECTURE 0, CLIN 16). CREDIT 3. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

SRGT 1460. CLINICAL - SURGICAL TECHNOLOGY/TECHNOLOGIST
(LECTURE 0, CLIN 15). CREDIT 4. WECM.
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional.

SRGT 1505. INTRODUCTION TO SURGICAL TECHNOLOGY
(LECTURE 4, LAB 2). CREDIT 5. WECM.
Orientation to surgical technology theory, surgical pharmacology and anesthesia, technological sciences, and patient care concepts.

SRGT 1509. FUNDAMENTALS OF PERIOPERATIVE CONCEPTS AND TECHNIQUES
(LECTURE 4, LAB 4). CREDIT 5. WECM.
In-depth coverage of perioperative concepts such as aseptic principles and practices, infectious processes, wound healing, and creation and maintenance of the sterile field.

SRGT 1541. SURGICAL PROCEDURES I
(LECTURE 5, LAB 0). CREDIT 5. WECM.
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the general, OB/GYN, genitourinary, otorhinolaryngology, and orthopedic surgical specialties incorporating instruments, equipment and supplies required for safe patient care.

SRGT 1542. SURGICAL PROCEDURES II
(LECTURE 5, LAB 0). CREDIT 5. WECM.
Introduction to surgical pathology and its relationship to surgical procedures. Emphasis on surgical procedures related to the cardiothoracic, peripheral vascular, plastic/reconstructive , ophthalmology, oral/maxillofacial, and neurological surgical specialties incorporating instruments, equipment, and supplies required for safe patient care.

SRGT 2230. PROFESSIONAL READINESS
(LECTURE 2, LAB 0). CREDIT 2. WECM.
Overview of professional readiness for employment, attaining certification, and maintaining certification status.

TECA 1354. CHILD GROWTH AND DEVELOPMENT
(LECTURE 3, LAB 0). CREDIT 3. ACGM.
A study of the physical, emotional, social, language, and cognitive factors impacting growth and development of children through adolescence. adolescence.

VNSG 1119. LEADERSHIP AND PROFESSIONAL DEVELOPMENT
(LECTURE 1, LAB 0). CREDIT 1. WECM.
Study of the importance of professional growth. Topics include the role of the licensed vocational nurse in the multi-disciplinary health care team, professional organizations, and continuing education. Prerequisites: VNSG 2331, VNSG 1231, VNSG 1236, VNSG 1329, VNSG 1230, VNSG 1261 with a grade of "C" or better. Co-requisites: VNSG 1234, VNSG 1432 and VNSG 2460.

VNSG 1204. FOUNDATIONS OF NURSING
(LECTURE 1, LAB 3). CREDIT 2. WECM.
Introduction to the nursing profession including history, standards of practice, legal and ethical issues, and role of the vocational nurse. Topics include mental health, therapeutic communication, cultural and spiritual diversity, patient preference, nursing process using clinical judgement model, and holistic awareness. Prerequisite: BIOL 2401 with a grade of "C" or better. Co-requisites: BIOL 2402, VNSG 1227 and VNSG 1323.

VNSG 1227. ESSENTIALS OF MEDICATION ADMINISTRATION
(LECTURE 1, LAB 2). CREDIT 2. WECM.
This course covers the general principles of medication administration including determination of dosage, preparation, safe administration and documentation of multiple forms of drugs. Instruction includes various systems of measurement. Prerequisite: BIOL 2401 with a grade of "C" or better. Co-requisites: BIOL 2402, VNSG 1204, VNSG 1323 and VNSG 2331.

VNSG 1230. MATERNAL-NEONATAL NURSING
(LECTURE 1, LAB 2). CREDIT 2. WECM.
A study of the biological, psychological, and sociological concepts applicable to basic needs of the family including childbearing and neonatal care. Utilization of the nursing process in the assessment and management of the childbearing family. Topics include physiological changes related to pregnancy, fetal development, and nursing care of the family during labor and delivery and the puerperium. Prerequisites: VNSG 2331, VNSG 1231, VNSG 1236, VNSG 1329 and VNSG 1261 with a grade of "C" or better. Co-requisites: VNSG 1119, VNSG 1234 and VNSG 1432.

VNSG 1231. PHARMACOLOGY
(LECTURE 1, LAB 2). CREDIT 2. WECM.
This course is the study of fundamentals of medications and their diagnostic, therapeutic and curative effect. Includes nursing interventions utilizing the nursing process. Prerequisites: BIOL 2402, VNSG 1323, VNSG 2331, VNSG 1204, VNSG 1227 and VNSG 1260 with a grade of "C" or better. Co-requisites: VNSG 1236 and VNSG 1329.

VNSG 1234. PEDIATRICS
(LECTURE 1, LAB 2). CREDIT 2. WECM.
Study of the care of the pediatric patient and family during health and disease. Emphasis on growth and developmental needs utilizing the nursing process. Prerequisites: VNSG 2331, VNSG 1231, VNSG 1236, VNSG 1329 and VNSG 1261 with a grade of "C" or better. Co-requisites: VNSG 1119, VNSG 1230 and VNSG 1432.

VNSG 1236. MENTAL HEALTH
(LECTURE 2, LAB 0). CREDIT 2. WECM.
This is an introduction to the principles and theories of positive mental health and human behaviors. Topics include emotional responses, coping mechanisms and therapeutic communication skills. Pre-requisites: BIOL 2402, VNSG 1323, VNSG 1204, VNSG 1227, VNSG 1260 and VNSG 2331 with a grade of "C" or better. Co-requisites: VNSG 1231 and VNSG 1329.

VNSG 1260. CLINICAL - PRACTICAL NURSING I
(LECTURE 0, CLIN 10). CREDIT 2. WECM.
This is a health-related, work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinical professional. Prerequisite: BIOL 2401 with a grade of "C" or better. Co-requisites: BIOL 2402, VNSG 1204, VNSG 1323 and VNSG 2331.

VNSG 1261. CLINICAL-PRACTICAL NURSING II
(LECTURE 0, CLIN 6). CREDIT 2. WECM.
This is a health-related, work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinical profession. Prerequisites: BIOL 2402, VNSG 1323, VNSG 2331, VNSG 1204, VNSG 1227 and VNSG 1260 with a grade of "C" or better. Co-requisites: VNSG 1329.

VNSG 1323. BASIC NURSING SKILLS
(LECTURE 1, LAB 4). CREDIT 3. WECM.
This course provides mastery of entry level nursing skills and competencies for a variety of healthcare settings. Utilization of the nursing process as the foundation for all nursing interventions. Prerequisite: BIOL 2401 with a grade of "C" or better. Co-requisites: BIOL 2402, VNSG 1204, VNSG 1227 and VNSG 1260.

VNSG 1329. MEDICAL-SURGICAL NURSING I
(LECTURE 2, LAB 2). CREDIT 3. WECM.
Application of the nursing process and clinical judgement model to the care of the adult patient experiencing medical-surgical conditions along the health-illness continuum in a variety of health care settings. Prerequisites: : BIOL 2402, VNSG 1323, VNSG 2331, VNSG 1204, VNSG 1227 and VNSG 1260 with a grade of "C" or better. Co-requisites: VNSG 1236 and VNSG 2331.

VNSG 1432. MEDICAL-SURGICAL NURSING II
(LECTURE 3, LAB 2). CREDIT 4. WECM.
Continuation of Medical-Surgical Nursing I with application of the nursing process to the care of the adult patient experiencing medical-surgical conditions along the health-illness continuum in a variety of health care settings. Prerequisites: VNSG 2331, VNSG 1231, VNSG 1236, VNSG 1329 and VNSG 1261 with a grade of "C" or better. Co-requisites: VNSG 1234, VNSG 1230 and VNSG 1119.

VNSG 2331. ADVANCED NURSING SKILLS
(LECTURE 1, LAB 5). CREDIT 3. WECM.
This course offers mastery of advanced level nursing skills and competencies in a variety of health care settings utilizing the nursing process as a problem-solving tool. Prerequisites: BIOL 2401 and VNSG 1323 with a grade of "C" or better. Co-requisites: BIOL 2402, VNSG 1204, VNSG 1227 and VNSG 1260.

VNSG 2460. CLINICAL-PRACTICAL NURSING III
(LECTURE 0, CLIN 12). CREDIT 4. WECM.
A health-related, work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinical professional. Prerequisites: VNSG 2331, VNSG 1231, VNSG 1236, VNSG 1329 and VNSG 1261. Co-requisites: VNSG 1432 and VNSG 1119.

WLDG 1412. INTRODUCTION TO FLUX CORED ARC WELDING (FCAW)
(LECTURE 3, LAB 4). CREDIT 4. WECM.
An overview of terminology, safety procedures, and equipment set-up. Practice in performing T-joints, lap joints, and butt joints using Flux Cored Arc Welding (FCAW) equipment. Demonstrate equipment safety checks; identify Flux Cored Arc Welding (FCAW) equipment parts; demonstrate the procedures for running a continuous bead in the flat position; demonstrate the procedures for welding a butt joint, a T-joint, a lap joint, and an outside corner joint in the flat, horizontal, and overhead positions; and demonstrate the procedures for making an open butt v-groove weld.

WLDG 1425. INTRODUCTION TO OXY-FUEL WELDING AND CUTTING (LECTURE 3, LAB 4). CREDIT 4. WECM.
This is an introduction to oxy-fuel welding and cutting, including history and future in welding, safety, setup and maintenance of oxy-fuel welding, and cutting equipment and supplies. Students will describe or explain oxy-fuel welding and cutting safety procedures and identify and classify fuels and filler metals. Students will perform entry-level oxy-fuel welding and cutting operations and select proper equipment and materials.

WLDG 1428. INTRODUCTION TO SHIELDED METAL ARC WELDING (SMAW)
(LECTURE 3, LAB 4). CREDIT 4. WECM.
This is an introduction to the shielded metal arc welding process. Emphasis will be placed on power sources, electrode selection, and various joint designs. Students will be able to select electrodes and amperage settings for various thicknesses of materials and welding positions; define principles of arc welding; explain electrode classifications; perform SMAW operations utilizing various positions electrodes and joint designs.

WLDG 1430. INTRODUCTION TO GAS METAL ARC (GMAW) WELDING (LECTURE 3, LAB 4). CREDIT 4. WECM.
This course studies the principles of gas metal arc welding, setup and use of GMAW equipment, and safe use of tools/ equipment. Instruction focuses on various joint designs. Students will describe welding positions with various joint designs on plate; describe safety rules and equipment used; describe the effects of welding parameters in GMAW; and understand safety rules, equipment used, and testing performed by visual inspection. Students will weld various types of structural material and diagnose welding problems and perform visual inspections.

WLDG 1434. INTRODUCTION TO GAS TUNGSTEN ARC (GTAW) WELDING (LECTURE 3, LAB 4). CREDIT 4. WECM.
This course is an introduction to the principles of gas tungsten arc welding (GTAW), setup and use of GTAW equipment, and safe use of tools and equipment. Welding instruction in various positions on joint designs. Students will describe various joint designs; describe safety rules and equipment; and describe the effects of welding parameters in GTAW; and will weld various structural materials.

WLDG 1435. INTRODUCTION TO PIPE WELDING
(LECTURE 3, LAB 4). CREDIT 4. WECM.
This is an introduction to welding of pipe using the shielded metal arc welding process, including electrode selection, equipment setup, and safe shop practices. Emphasis is placed on weld positions 1G and 2G using various electrodes. Students will describe equipment and require pipe preparation and perform 1G and 2G welds using various electrodes. Prerequisite: WLDG 1457 with a grade of "C" or better.

WLDG 1457. INTERMEDIATE SHIELDED METAL ARC (SMAW) WELDING (LECTURE 3, LAB 4). CREDIT 4. WECM.
This is a study of the production of various fillets and groove welds. Students will prepare specimens for testing in all test positions. Students will identify principles of arc welding; describe arc welding operations of fillet and groove joints; explain heat treatments of low alloy steels; and explain weld size and profiles. The student will prepare test plates; perform fillet welds in the overhead position; perform air carbon arc weld removal; perform bevel groove welds with backing plates in various positions; and demonstrate use of tools and equipment. Prerequisite: WLDG 1428 with a grade of 'C' or better.

WLDG 2406. INTERMEDIATE PIPE WELDING
(LECTURE 3, LAB 4). CREDIT 4. WECM.
This is a comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 1G, 2G, 5G and 6G using various electrodes. Topics covered include electrode selection, equipment setup and safe shop practices. Students will describe equipment and require pipe preparation. Students will perform 1G, 2G, 5G and 6G welds using various electrodes. Prerequisite: WLDG 1435 with a grade of "C" or better.

WLDG 2413. WELDING USING MULTIPLE PROCESSES
(LECTURE 3, LAB 4). CREDIT 4. WECM.
This course provides instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shield metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW) or any other approved welding process. Prerequisite: WLDG 2451 with a grade of "C" or better.

WLDG 2451. ADVANCED GAS TUNGSTEN ARC (GTAW) WELDING (LECTURE 3, LAB 4). CREDIT 4. WECM.
Advanced GTAW welding, including welding in various positions and directions. Students will exhibit expertise in various welding positions; describe safety rules and equipment used; and describe the effects of welding parameters in GTAW. Students will weld various joint designs; diagnose welding problems; and perform visual inspection. Prerequisite: WLDG 1434 with a grade of "C" or better.

WLDG 2453. ADVANCED PIPE WELDING
(LECTURE 3, LAB 4). CREDIT 4. WECM.
Advanced topics involving welding of pipe using the shielded metal arc welding (SMAW) process. Topics include electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 5G and 6G using various electrodes. Students will describe equipment and required pipe preparation and perform 5G and 6G welds using various electrodes. Prerequisite: WLDG 2406 with a grade of "C" or better.