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# COURSE DESCRIPTIONS

## ACCOUNTING

### **ACCT101 PRINCIPLES OF FINANCIAL ACCOUNTING (3)**

Prerequisite: BSKL020 and BSKL061 or equivalent placement scores. Introductory course covering fundamental accounting principles and financial statement preparation. Emphasis on analysis of effects of business transactions on the earnings, financial position, and cash flows of business entities.

**ACCT102 MANAGERIAL ACCOUNTING (3)** Prerequisite: ACCT101 with a grade of C or better. Introduction to accounting methods and processes of managerial and cost accounting. Emphasis on developing and using accounting information related to a manufacturing environment, including management control and decision making.

**ACCT109 APPLIED ACCOUNTING PROCEDURES (3)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Designed to give students who have no previous knowledge of accounting a basic understanding of accounting terminology and procedures used to record, classify, and summarize financial data for a sole proprietorship.

**ACCT125 COMPUTERIZED ACCOUNTING APPLICATIONS (3)** Prerequisites: ACCT109 and CAPP125 with grades of C or better or consent of instructor. Project-intensive approach to accounting and reporting utilizing accounting software currently used in industry. Emphasis on using a microcomputer to process financial accounting data and prepare financial statements and related reports.

**ACCT126 INTRODUCTION TO QUICKBOOKS (1)** Introduction to the basic concepts and skills necessary for using QuickBooks. Emphasis on entering accounts payable/receivable and payroll transactions, completing end-of-year processes, and generating reports to make business decisions.

**ACCT132 BUSINESS TAXATION (3)** Prerequisite: ACCT101 with a grade of C or better or consent of instructor. Introduction to the federal and state laws that affect employment practices, payment of wages, benefit plans, worker's compensation, garnishments, and sales tax. Emphasis on compliance with federal and state reporting requirements.

**ACCT137 INTRODUCTION TO FEDERAL TAXATION (3)** Prerequisite: ACCT101 with a grade of C or better or consent of instructor. Introduction to federal income tax principles and procedures. Emphasis on application of tax laws to solve tax problems, develop tax plans, perform tax research, and prepare required returns.

**ACCT175 ACCOUNTING INTERNSHIP (4)** Supervised on-the-job training plan, tailored to meet student and employer needs. Must be taken after first year courses are completed and with consent of instructor.

**ACCT203 INTERMEDIATE FINANCIAL ACCOUNTING I (3)** Prerequisite: ACCT101 with a grade of C or better. Financial accounting theory and practice are applied in accordance with generally accepted accounting principles for financial reporting of corporate entities. Emphasis on corporate financial statement preparation and analysis.

### **ACCT220 CURRENT TOPICS IN ACCOUNTING (3)**

Prerequisites: ACCT102 and ACCT203 with grades of C or better. Accounting theory and practice are applied to selected topics related to financial reporting and management decision-making. Course will utilize case studies and current events involving the accounting profession.

## AGRICULTURE

**AGRI101 AG LEADERSHIP AND ISSUES I (2)** Course in leadership is designed to develop an individual's ability to become a team leader. Class activities will include team approach, problem solving, professional growth, and current issues in agriculture.

**AGRI102 AG LEADERSHIP AND ISSUES II (1)** Continuation of AGRI101.

**AGRI103 AG LEADERSHIP AND ISSUES III (2)** Continuation of AGRI102.

**AGRI104 AG LEADERSHIP AND ISSUES IV (1)** Continuation of AGRI103.

**AGRI106 GLOBAL AGRICULTURE (3)** A general education course intended for non-agriculture majors only, credit will not apply to an A.A. degree for agriculture majors. Course introduces the student to economic, political, cultural, and environmental issues that affect food production and distribution in the advancement of societies in developed and developing countries.

**AGRI108 ANIMAL SCIENCE (3)** Presents principles of animal agriculture essential for a basic understanding of the animals that are chief producers of food and fiber for human consumption. Specific breeds, animal behavior, anatomy, physiology, reproduction, and nutrition will be included.

**AGRI112 LIVESTOCK EVALUATION (3)** Course is a study of livestock evaluation in selection of breeding and marketing animals including dairy cattle, beef cattle, swine, and sheep.

**AGRI114 LIVESTOCK MANAGEMENT (3)** Course is a study of the segments of livestock production which identifies the essential ingredients needed by producers to raise productive and profitable livestock.

**AGRI116 ANIMAL NUTRITION (3)** Study includes the nutritional needs of livestock and the formulation of feeds, including hormones, antibiotics, minerals, vitamins, and other feed additives.

**AGRI118 PLANT SCIENCE (3)** Study includes plant and seed development and selection, the cultural practices in the production of common farm crops, and seed and weed identification.

**AGRI120 SOILS I (3)** Study includes soil development composition, types, usages, soil conservation, cropping systems, and soil improvements.

**AGRI121 SOILS II (3)** Prerequisite: AGRI120. Study includes soil composition and fertilization practices needed for proper nutrition of plants.

**AGRI123 SOIL EROSION AND MANAGEMENT (3)**  
Prerequisite: AGRI120. Course includes training in surveying soil erosion control through construction of structures and management practices.

**AGRI125 NATURAL RESOURCES (3)** Course includes the study of natural resources as they relate to our existence and their mutual relationship to each other.

**AGRI127 FARM CHEMICALS (3)** Course includes the study of the production, distribution, handling, and application of farm chemicals, including insecticides, rodenticides, fungicides, herbicides, and brush killers.

**AGRI129 GENERAL HORTICULTURE (3)** Course includes study of horticultural crops and the horticultural industry. Study includes plant propagation and vegetable/fruit production.

**AGRI132 AGRICULTURE ECONOMICS (3)** Study focuses on the factors affecting the income and expenditures of agricultural business, and the methods and systems of buying and selling products.

**AGRI134 MARKETING FARM COMMODITIES (3)** Course presents theory and practice in marketing livestock and livestock products, analysis of costs and efficiency in grain marketing and processing organizations, and the price-making process.

**AGRI136 AG CREDIT AND FINANCE (3)** Course emphasizes general principles associated with evaluation of management and use of capital. Will develop an understanding of agricultural finance to help the banker satisfy credit needs of modern agriculture.

**AGRI138 AG BUSINESS MANAGEMENT (3)** Study includes management functions and economics of agriculture organizations and operations including input-output analysis, efficient allocations of resources, enterprise combinations, and budget analysis.

**AGRI147 PLANT IDENTIFICATION (4)** Course includes the study and identification of various landscaping and greenhouse plants.

**AGRI151 LANDSCAPE DESIGN AND MAINTENANCE (3)**  
Prerequisites: AGRI129 and CAPP125 or consent of advisor. A comprehensive study of landscaping including functional and aesthetical aspects of landscaping, maintenance and implementation, and computer aided design (CAD).

**AGRI152 TURF MANAGEMENT (4)** Prerequisite: AGRI118 and AGRI120. Course focuses on identifying, establishing, and maintaining a turfgrass environment, including cultural practices of different environments.

**AGRI154 GREENHOUSE MANAGEMENT W/LAB (4)**  
Course presents design, environmental control, and equipment found in the greenhouse. Instruction includes principles and practices relative to plant nutrition, pest control, production, handling, and marketing greenhouse production.

**AGRI167 CDL LICENSING (2)** Course is designed to enable students to pass the state Commercial Driver's License exam.

Students must qualify for the Class A CDL with all appropriate endorsements.

**AGRI168 COMMERCIAL APPLICATOR LICENSING (2)**  
Course is designed to complement other courses offered in weed, insect, disease control, and pesticide application to give the students the skills necessary to pass the state and federal examination for commercial applicator licensing.

**AGRI174 CROP AND INSECT SCOUTING (2)** Utilizing real-life crop growing environments, students will learn to identify weeds, insect and disease infestations, determine life cycles, damage symptoms, economic thresholds, and recommended control alternatives.

**AGRI175 OCCUPATIONAL INTERNSHIP (2-8)** Prerequisite: Minimum cumulative GPA of 2.0 and consent of instructor. Supervised by agricultural staff and designed to assist the student in developing good work habits. Includes training in specific areas unique to the employer and provides basis for career decision for the student.

**AGRI179 INNOVATIVE HORTICULTURE (1)** Designed to provide the student an opportunity to apply horticultural knowledge, problem solving skills, and creativity to develop and/or construct a capstone project. Instructor approval is needed to register for the class. Student must have completed 55 credit hours in the A.A.S. in Agriculture with emphasis in Horticulture.

**AGRI180 PROBLEMS IN AGRICULTURE (1-3)** Independent study of a special problem in agriculture under the supervision of an agriculture instructor.

## ART

**ART101 ART APPRECIATION (3)** Study of art history from the last of the 19th century through the present. Consists of formal lectures, films, slides, gallery and studio visits, assigned readings, as well as hands-on experiences with art materials. Includes the evolution of art by focusing on the major art movements of the past 100 years. Encourages appreciation of visual art through the study of content, design, technique, and criticism of art. Students learn how art changed during this period and how it reflects the dynamics of 20th century civilization.

**ART103 DESIGN I (3)** Course includes two three-hour lecture/studio periods each week in which students explore the basic concepts of design through the use of the visual elements. Emphasis is placed on the student becoming able to recognize and manipulate these elements and concepts.

**ART104 DESIGN II (3)** Prerequisite: ART103. Course includes two three-hour lecture/studio periods each week in which compositional principles of art are explored through a variety of two- and three-dimensional materials. Emphasis is placed on the student solving specific problems creatively.

**ART106 WATERCOLOR I (3)** Course introduces the materials and techniques of aqua media painting, various preparations of paper, and the use of brushes and other tools. Control of transparent color will be learned through experimentation.

**ART107 WATERCOLOR II (3)** Prerequisite: ART106. Continuation of Watercolor I with advanced studio experience centered around a series of related paintings.

**ART108 WATERCOLOR III (3)** Prerequisite: ART107. Includes advanced problems and techniques of aqua media painting.

**ART110 PRINTMAKING (3)** Course includes two three-hour studio periods each week in which traditional and contemporary methods of printing are explored including wood block, etching and monoprint.

**ART112 DRAWING I (3)** Entry-level art course is required for all art majors. As a foundation course, emphasis is placed on drawing as an expressive medium. Content is based on a series of perceptual and conceptual assignments designed to force students to reach inside themselves to define, through their work, a sense of artistic self.

**ART113 DRAWING II (3)** Prerequisite: ART112. The second of a two-course sequence required for all art majors. As a foundation course, emphasis is placed on drawing as an expressive medium. Students search for expression of their own personal artistic identity through a series of process-oriented assignments using various colored media.

**ART114 FIGURE DRAWING I (3)** The human figure is analyzed in terms of structure, proportion and form. Emphasis is placed on representative as well as conceptual approaches.

**ART115 FIGURE DRAWING II (3)** Continuation of the study of refining the student's technical skills in drawing. Emphasis is placed on technical skills rendering the figure, as well as conceptual approaches and development.

**ART116 PAINTING I (3)** Students concentrate on painting as an expressive medium. Course is designed to allow students to explore a variety of subject matter and experiment with painting techniques in a search for personal artistic identity.

**ART117 PAINTING II (3)** Prerequisite: ART116. Study includes form, color and organization of painting in oils and acrylics with emphasis placed on individual expression.

**ART118 PAINTING III (3)** Prerequisite: ART117. Offered by appointment only. Students may concentrate in watercolor, oil, acrylics, or mixed media.

**ART120 MODERN ART HISTORY (3)** Required for art majors and also serves as a fine arts course for those interested in modern art. Emphasis is placed on the creative nature of man and how creativity enriches society and the social, economic and political conditions that influenced and constructed modern art. Study begins with the development of impressionism and moves through the major art movements of the late nineteenth and twentieth centuries.

**ART122 SCULPTURE I (3)** Consists of two three-hour lecture/laboratory periods each week and includes principles of sculptural organization and stresses individual development of three-dimensional forms.

**ART123 SCULPTURE II (3)** Prerequisite: ART122. A continuation of Sculpture I with the student developing a body of work that is interrelated. Includes exploration of a variety of materials: metal, wood, found objects, etc., with an emphasis placed on individual exploration and development.

**ART126 CERAMICS I (3)** Course designed to introduce the student to basic clay construction techniques, basic ways of glazing, and firing systems. Emphasis is placed on students

acquiring technical proficiency in a variety of constructive methods and glazing techniques.

**ART127 CERAMICS II (3)** Prerequisite: ART126. Continuation of Ceramics I with students becoming more proficient in construction techniques which are appropriate for their ideas. Emphasis is placed on students developing a body of work that is interrelated.

**ART130 FIBER ARTS I (3)** Introductory course that explores a variety of traditional and nontraditional mediums and techniques in the fiber arts. Emphasis is placed upon process and investigation.

**ART131 FIBER ARTS II (3)** Continuation of the study and exploration of traditional and nontraditional mediums and techniques in the fiber arts. Emphasis is placed upon process and further investigation of personal expression as well as development of craftsmanship through the fibers media.

**ART180 PROBLEMS IN ART (3)** Prerequisite: Must complete courses I and II of desired subject area and have consent of instructor. Includes an independent study of a special problem in art under the supervision of an art instructor. Students will concentrate on a particular medium, subject or source. May be repeated in a different problem area.

## AUTOMOTIVE

**AUTO101 PREVENTIVE MAINTENANCE (5)** Students will develop skills and knowledge required to pass the state safety inspection test and perform jobs usually done in the service bay of a service station.

**AUTO103 MANUAL TRANSMISSIONS, DRIVELINES AND AXLES (5)** Instruction for development of skills and knowledge required to diagnose and repair drivelines. Includes clutch, transmission, drive shaft, differential, axles, wheels, and transaxles.

**AUTO105 AUTOMATIC TRANSMISSIONS (5)** Instruction designed to develop skills and knowledge required to diagnose and repair automatic transmissions and automatic transaxles with the use of a service manual. Includes the study of automatic transmission design and theory of operation.

**AUTO108 ADVANCED ENGINE PERFORMANCE (6)** Course is an advanced study of automotive diagnostic equipment and troubleshooting techniques related to modern vehicle powertrains. Course concentrates on electronic engine controls including fuel injection, feedback systems and computer controlled engine management systems.

**AUTO109 FUEL SYSTEMS AND EMISSIONS (5)** Instruction designed to develop skills and knowledge required to diagnose and service fuel systems. Includes conventional and electronic carburetion and fuel injection systems.

**AUTO111 COMPUTERIZED ENGINE CONTROL (5)** Instruction designed to develop skills and knowledge required to diagnose and repair computerized engines. Includes C-3, TBI, EFI, C3I, DIS, and EEC IV computerized systems.

**AUTO113 STEERING, SUSPENSION AND WHEELS (5)** Instruction designed to develop skills and knowledge required to diagnose and repair steering and suspension systems. Includes wheel balance, four-wheel alignment, springs and

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torsion bar suspension, power steering pump and gears, and rack and pinion steering.

**AUTO115 AUTOMOTIVE BRAKES (5)** Instruction designed to develop skills and knowledge required to diagnose and repair brakes, including drum and disc systems, power units, and ABS.

**AUTO116 AUTOMOTIVE ELECTRICAL SYSTEM FUNDAMENTALS (3)** Designed to develop skills and knowledge required to understand fundamental principles of electricity and how these principles apply to automotive systems. Included is the study of wiring diagrams, electrical symbols, and how to utilize appropriate equipment such as meters and scopes in the troubleshooting process.

**AUTO118 ADVANCED AUTOMOTIVE ELECTRICAL AND ELECTRONICS (3)** Course is an in depth focus on electrical theory, the understanding and application of automotive electrical and electronic and computer systems as related to modern vehicle systems. Instruction includes methods to successfully troubleshoot vehicle electrical and electronic problems and affect appropriate repairs.

**AUTO119 AUTOMOTIVE HEATING AND AIR CONDITIONING (5)** Instruction designed to develop skills and knowledge required to diagnose and repair problems related to passenger comfort. Includes both automatic and manual units.

**AUTO121 AUTOMOTIVE ENGINES (6)** Instruction designed to develop skills and knowledge required to diagnose and repair gasoline engines. Students will rebuild an engine and install it in a vehicle that must run properly.

**AUTO123 SERVICE OPERATION MANAGEMENT (3)** Instruction designed to enable the student to better understand the variables encountered in operating a service business. Areas of content include: management, finances, organization, customer and employee relations, marketing, legal guidelines, and OSHA safety requirements.

## BASIC SKILLS

Basic skills courses are considered developmental and are designed to assist the student to reach regular college skill levels. These courses do not apply toward any SFCC degree or certificate. They do calculate in G.P.A.

**BSKL003 INTRODUCTION TO BASIC SKILLS (3-6)** Prerequisite of COMPASS or equivalent placement scores in Pre-Algebra of 30 and below, or in Writing of 26 and below or recommendation of instructor. Individualized course designed for students needing skills necessary for placement into Basic English Lab, Basic Math Lab or Basic Reading Lab. Course may be repeated. Does not apply toward a degree or certificate.

**BSKL005 INTENSIVE ENGLISH FOR NON-NATIVE SPEAKERS (3)** Course for students whose primary language is not English. This course will cover basic English grammar and usage for academic purposes, as well as speaking, listening, reading and writing skills necessary for academic success. Does not apply toward a degree or certificate.

**BSKL010 BASIC ENGLISH LAB (3)** Prerequisite: Enhanced ACT English score of 13 or below or equivalent placement score. Should be taken concurrently with or before BSKL020. Course is a review of English grammar and mechanics.

Instruction consists of three lecture and one lab hour (arranged) per week. Student must earn a C in this class to pass. Does not apply toward a degree or certificate.

**BSKL014 BASIC READING LAB (3)** Prerequisite: Enhanced ACT reading score of 12 or below or equivalent placement score. This class provides systematic instruction for development and improvement of reading skills to prepare student for BSKL015. Does not apply toward a degree or certificate.

**BSKL015 READING (3)** Prerequisite: BSKL014 with a grade of C or better or Enhanced ACT reading score of 13 through 17 or equivalent placement score. Course provides systematic instruction for development and improvement of reading/learning/critical thinking skills. To pass this class students must achieve a minimum level of 12 on the Nelson Denny Reading Achievement Test and comprehend 80 percent of the college level reading material. Students not meeting these requirements will be required to repeat the course the following semester. Student must earn a C in this class to pass. Does not apply toward a degree or certificate.

**BSKL016 TEXTBOOK READING TECHNIQUES (3)** Course introduces students to various strategies useful in reading and studying college textbooks. Paired with a general education course, most activity will be focused on the transference of reading skill appropriate for success in the paired course. Does not apply toward a degree or certificate.

**BSKL020 INTRODUCTION TO WRITING (3)** Prerequisite: Enhanced ACT English score of 18 or below or equivalent placement score. If less than 14 on the Enhanced ACT English — must also enroll in Basic English Lab and Reading. Study of the fundamentals of language, usage, and paragraph writing. A grade of C or better is required to advance to Composition I, Business Communications, or Technical Writing. Does not apply toward a degree or certificate.

**BSKL061 BASIC MATH LAB (3)** Prerequisite: Enhanced ACT math score of 15 or below or equivalent placement score. Class is a review of basic math skills to prepare for students for Elementary Algebra, Business Math or Technical Math I. Topics include basic operations with whole numbers, exponents, LCM and GCF, fractions, decimals, ratio/proportion, unit analysis, percents, and signed numbers. Students must earn a C in this class to advance to the next math class. Does not apply toward a degree or certificate.

**BSKL064 ELEMENTARY ALGEBRA (3)** Prerequisite: BSKL061 with a grade of C or better or equivalent placement score. Topics include rules of exponents, arithmetic basic operations with polynomials, linear equations in one variable, linear inequalities, absolute values in one variable, factoring polynomials, and algebraic fractions. Does not apply toward a degree or certificate.

## BIOLOGICAL SCIENCE

**BIO100 INTRODUCTION TO BIOLOGICAL SCIENCES (3)** Prerequisites: BSKL015, BSKL020 and MATH112 with grades of C or better or equivalent placement scores. Introduction of biology that develops understanding of basic, unifying concepts in science and biology. Topics include: the scientific method, biochemistry, cell biology, metabolism, genetics, evolution, ecology, and human ecology. This is a writing intensive course and completion of, or concurrent enrollment

in ENGL101 is strongly recommended. This course satisfies part of the natural science general education requirements and may NOT be used in conjunction with BIO112, BIO125 or their equivalents to fulfill these requirements.

**BIO103 HUMAN BIOLOGY (3)** Prerequisite: BSKL020 with a grade of C or better or equivalent placement score. An introduction to the structure and functioning of the human body and its systems. Topics covered will include, but are not limited to: biochemistry, organization, homeostasis, and structural maintenance of cells, tissues, and organ systems of the human body. Can NOT be taken if already have credit for BIO112, BIO125, BIO126, BIO207 or BIO208.

**BIO105 WILDLIFE CONSERVATION (3)** Prerequisites: BSKL015 and ENGL101 with grades of C or better or equivalent placement scores. Integrated study focused on historical, cultural, and scientific aspects of wildlife conservation. Topics include: public attitudes/perceptions, wildlife ethics, biodiversity, exotic species, population/community ecology, ecosystem management, and human impact. This is a writing intensive course and completion of, or concurrent enrollment in ENGL102 is strongly recommended.

**BIO112 INTRODUCTION TO BIOLOGY W/LAB (5)** Prerequisites: BSKL015, BSKL020 and MATH112 with grades of C or better or equivalent placement scores. Introduction of biology that develops understanding of basic, unifying concepts in science and biology through an investigative laboratory environment. Topics include: the scientific method, biochemistry, cell biology, metabolism, genetics, evolution, ecology, and human ecology. This is a writing intensive course and completion of, or concurrent enrollment in, ENGL101 is strongly recommended. This course satisfies only part of the natural science general education requirements and may NOT be used in conjunction with BIO100 or BIO103 or their equivalents to fulfill these requirements.

**BIO115 HUMAN SEXUALITY (3)** Prerequisites: BSKL020 with a grade of C or better or equivalent placement scores. ENGL101 or concurrent enrollment is recommended. Course explores the sociological, biological, and psychological aspects of human sexuality. Topics will include anatomy, social understandings of sexuality genetics, gender, reproduction, contraception, STDs, sexual violence, human sexual behavior, and sexual orientation. Same as PSY115 or SOC115.

**BIO121 MICROBIOLOGY FOR ALLIED HEALTH W/LAB (4)** Prerequisite: CHEM101 or BIO207 or BIO208 or consent of instructor. Course presents basic principles of infection, immunity and control of infectious microbes. Introduces bacteriology, virology, parasitology, and mycology. Designed for SFCC nursing and allied health majors.

**BIO125 BIOLOGY I W/LAB (5)** Prerequisites: BSKL015, BSKL020 and MATH112 with grades of C or better or equivalent placement scores. First semester of a two-semester introduction to biological sciences intended for biology and related majors. Topics include: philosophical/historical/social context of biology, scientific method and investigative techniques, biological structure/function at molecular/cellular levels, genetics, and plant form/function/diversity. This is a writing intensive course and completion of, or concurrent enrollment in, ENGL101 is strongly recommended. This course satisfies only part of the natural science general education requirements and may NOT be used in conjunction

with BIO100, BIO103, BIO112 or their equivalents to fulfill these requirements.

**BIO126 BIOLOGY II W/LAB (5)** Prerequisites: BIO112 or BIO125 with a grade of C or better or consent of instructor. Second semester of a two-semester introduction to biological sciences intended for biology and related majors. Topics include: philosophical/historical/social context of biology, animal morphology, embryology, taxonomy/systematics, life histories, ecology, and evolution. This is a writing intensive course and completion of, or concurrent enrollment in ENGL101 is strongly recommended. This course satisfies only part of the natural science general education requirements and may NOT be used in conjunction with BIO100, BIO103, BIO112 or their equivalents to fulfill these requirements.

**BIO130 TOPICS IN BIOLOGY (1-3)** Study of a major topic in biology/science. Content/topics change and may include: ecology, bio-history, evolution, science in science fiction, or history of science. Specific subjects will be announced prior to course offerings.

**BIO140 INTRODUCTION TO BIOTECHNOLOGY I (5)** Prerequisites: BSKL020 and BSKL064 with grades of C or better or equivalent placement scores. This course is an introduction to the field of biotechnology, its relevance to society and application to biology, agriculture, modern medicine, energy source alternative, bio-safety, and bioethics. Students will learn to apply scientific methods of study and concepts through hands-on experiments to develop the knowledge and laboratory skills required in biotechnology research and industry.

**BIO141 INTRODUCTION TO BIOTECHNOLOGY II (5)** Prerequisite: BIO140. This course is a continuation of the Introduction to Biotechnology I course. Students will continue to develop lab skills and learn to apply scientific methods of study and concepts through hands-on experiments of specific applications in biotechnology industry and research.

**BIO207 HUMAN ANATOMY W/LAB (4)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores, and BIO100, BIO103, BIO112 or high school biology course taken within the previous five years, or consent of instructor. Study of gross and microscopic anatomy of the human organs, tissues, and systems. Includes two hours of lecture and two laboratory periods of two clock hours each per week.

**BIO208 HUMAN PHYSIOLOGY W/LAB (4)** Prerequisites: BSKL015, BSKL020 and BIO207 with grades of C or better or equivalent placement scores. Consent of instructor to override requirement of BIO207. Course presents the basic biological functions of the human body from cell to tissue, tissue to organ, and organ to organ system with attention to the interrelationships at these levels. Includes three hours of lecture and one laboratory period of two clock hours per week.

**BIO210 PRINCIPLES OF GENETICS W/LAB (4)** Prerequisites: ENGL101 and BIO112 or BIO125 with a grade of C or better or consent of instructor. A comprehensive introduction to fundamental principles of inheritance intended for biology and related majors. Topics include: philosophical/historical/social context of genetics, the physical/biochemical/chromosomal/cytological/mathematical bases for inheritance patterns, selection and breeding, and evolution. This is a writing intensive course and completion of, or concurrent enrollment in ENGL102 is strongly recommended.

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**BIO280 PROBLEMS IN BIOLOGY (1-3)** Independent course presenting the study of a special problem in biology under the supervision of a science instructor.

## BUILDING MATERIALS

### **BLDG175 BUILDING MATERIALS INTERNSHIP (4-8)**

Provides on-the-job experience. This training plan, developed and supervised jointly by a member of the college staff and the training station sponsor, outlines the basic area of experience. A series of training guides and assignments must be completed.

### **BLDG180 PROBLEMS IN BUILDING MATERIALS (1-3)**

Independent study of a special problem in building materials under the supervision of an instructor.

## BUSINESS ADMINISTRATION

**BADM101 INTRODUCTION TO BUSINESS (3)** Prerequisite: BSKL014 or equivalent placement score. Introduction to the principles, practices and problems encountered in the general business environment. Topics include options for organizing a business, and the basic functions of accounting, marketing, management, and finance.

### **BADM103 THE LEGAL ENVIRONMENT OF BUSINESS (3)**

Prerequisites: BSKL015 and BSKL020 or equivalent placement scores. Investigation of various legal issues encountered in the business environment. Emphasis is placed on developing an understanding of the court system and specific topics of law including contracts, torts, employment law, product liability, and consumer protection.

### **BADM105 BUSINESS LAW II (3)** Prerequisite: BADM103.

Instruction includes the law of partnerships, corporations, real property and loans, insurance, security devices, bankruptcy, trust, estate, and government regulations.

### **BADM107 PERSONAL FINANCE (3)** Prerequisites: BSKL014

and BSKL061 or equivalent placement scores. This course is designed to help students manage personal income. Student will become familiar with the techniques necessary to make choices when considering major purchases, tax planning, insurance, borrowing, investing and other personal finance issues.

### **BADM109 BUSINESS ETHICS (3)** Prerequisite: BSKL010 or

equivalent placement score. This course is an introduction to ethical principles related to business and society. Corporate social responsibility as well as ethical perspectives related to internal and external stakeholders will be the focus of the course.

## BUSINESS MANAGEMENT

**BSMT106 PRINCIPLES OF MARKETING (3)** Prerequisite: BSKL014 or equivalent placement score. This is an introductory course emphasizing key concepts and issues underlying the modern practice of marketing. The marketing process is analyzed through the four main decision areas of products and services, distribution, promotion, and pricing.

**BSMT108 PRINCIPLES OF MANAGEMENT (3)** Prerequisite: BSKL015 and BSKL020 or equivalent placement scores. This

introductory course provides an overview of the theory and practice of management. The course covers the basic functions of management: planning, organizing, leading, and controlling.

**BSMT110 SALESMANSHIP (3)** Prerequisite: BSKL014 or equivalent placement score. This course consists of the study of selling as a major function of the marketing mix. The focus is on consumer behavior, selling techniques and two role play sales presentations.

**BSMT112 VISUAL MERCHANDISING (3)** Prerequisite: BSKL014 or equivalent placement score. This course presents the principles of design as applied to retail stores. Topics include various design principles, color, mannequin usage, and lighting. The class creates several original window designs during the semester.

**BSMT115 PRINCIPLES OF SUPERVISION (3)** Course is designed for the first-line foreman or supervisor. Topics include how to supervise, leadership styles, employee communications, human relations, delegation, discipline and grievance procedures.

### **BSMT117 HUMAN RESOURCE MANAGEMENT (3)**

Prerequisites: BSMT108 or consent of instructor. Course introduces students to the HRM function. Emphasis will be placed on those HRM responsibilities that managers must consider: recruiting and selection, equal employment opportunity, compliance, development and training, performance appraisal, compensation and employee benefits.

**BSMT120 ADVERTISING (3)** Prerequisite: BSKL010 or equivalent placement score. Course is an introduction to the field of advertising. Emphasis is on consumer behavior, research data, strategic planning and brand positioning. An original ad campaign is created using creative product strategies.

**BSMT125 HUMAN RELATIONS (3)** Prerequisite: BSKL014 or equivalent placement score. Course examines business organizations as a social system. Topics consist of motivation, perception, communication, behavior theories, and group dynamics. In-class activities are employed to emphasize topics covered in class.

**BSMT130 BUSINESS STRATEGIES (3)** Prerequisites: BSMT106, BSMT108, BSMT125, ACCT102, ECON101, ENGL110 or consent of instructor. Course is the capstone course for Business Management majors. Students will draw on their prior coursework to solve business problems. This course helps provide a basic understanding of the total enterprise of businesses, meaning the environment in which it operates its internal condition, and its prospects for success.

**BSMT132 E-COMMERCE MARKETING (3)** Prerequisite: BSKL014 or equivalent placement score. Course presents an overview of the e-business system. Topics include a review of technology utilized to create e-businesses. The class focus is on the creation of an original Web page.

**BSMT175 BUSINESS MANAGEMENT INTERNSHIP (3 OR 6)** On-the-job experience tailored to enforce topics taught within the degree. Student supervision will be a cooperative arrangement between the student's academic advisor and employer. Progress reports and a final report documenting work experience will be submitted by students. Instructor approval required to register for the course.

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## CHEMISTRY

### **CHEM101 INTRODUCTION TO CHEMISTRY W/LAB (5)**

Prerequisite: ENGL101 with a grade of C or better. One-semester introduction for non-science majors designed to acquaint the student with scientific reasoning. A writing intensive course, which introduces the basic principles of chemistry and their applications to current issues. Instruction consists of three lecture and four lab hours per week.

### **CHEM113 FUNDAMENTALS OF CHEMISTRY W/LAB (5)**

Prerequisite: MATH112 with a grade of C or better or equivalent placement score. A course for allied health students or a preparatory course intended for science majors that will focus on measurement, nomenclature, formula and equation writing, stoichiometry, and periodic properties, with an emphasis on algebraic problem solving and scientific reasoning. Instruction consists of three lecture and four lab hours per week.

**CHEM123 GENERAL CHEMISTRY I W/LAB (5)** Prerequisites: BSKL020 with a grade of C or better or equivalent placement scores and either one-year high school chemistry, MATH114, or CHEM113 with a grade of B or better. Intended for the science major and science-oriented fields, which examines the structure of the atom, periodic classification, molecular structures, chemical reactions, aqueous solutions, and chemical energetics. Instruction includes three lecture and four lab hours per week.

**CHEM124 GENERAL CHEMISTRY II W/LAB (5)** Prerequisite: CHEM123. A continuation of CHEM123. Course places emphasis on chemical energetics, entropy, chemical equilibria, reduction-oxidation chemistry, and reaction pathways in organic/biochemistry. Instruction consists of three lecture and four lab hours per week.

**CHEM126 ORGANIC CHEMISTRY W/LAB (5)** Prerequisite: CHEM123 with a grade of B or better. First course of two-semester sequence in organic chemistry. A study of the structure and bonding in organic compounds, reaction mechanisms, and IR and NMR spectroscopy. Instruction consists of three lecture and four lab hours per week.

**CHEM180 PROBLEMS IN CHEMISTRY (1-3)** Prerequisite: CHEM101 or CHEM113. Independent study of a special problem in chemistry, under the supervision of a science instructor.

**CHEM265 ELEMENTARY ORGANIC AND BIOCHEMISTRY W/LAB (5)** Prerequisite: CHEM101, CHEM113 or CHEM123 with a grade of C or better. Introductory course in organic chemistry and the fundamental concepts of biochemistry. Course will review basic functional group structure, nomenclature, reactivity, and introduce organic reaction mechanisms. Course will explore the molecules associated with life functions, with an emphasis on physiological, nutritional, and comparative aspects. Required for some non-chemistry majors and generally does not transfer for chemistry majors.

## CHILD DEVELOPMENT

### **ECD101 INTRODUCTION TO EARLY CHILDHOOD (3)**

Course is an overview of early childhood programs and curricula, historical and present, and an examination of qualities and skills necessary for working with young children.

Observation of young children in various classroom settings will be incorporated into the course.

### **ECD103 CHILD GROWTH AND DEVELOPMENT (3)**

Provides a general understanding of the physical, social, emotional, language and cognitive development of early childhood, and the importance of the environment and interrelationships on development.

### **ECD107 CHILD NUTRITION, HEALTH AND SAFETY (3)**

Presents basic factors that affect child health including basic nutrition, clothing habits, health routines, hygiene, childhood diseases, first aid, and safety. Curriculum includes care facilities factors such as a safe, challenging learning environment and licensing requirements.

### **ECD109 OBSERVATION, PLANNING AND ASSESSMENT (3)**

Course provides the student with opportunity to understand methods of observing children from birth to age 8, how to plan after observation, and make enhancements to curriculum based on assessment.

### **ECD111 LANGUAGE DEVELOPMENT EARLY LITERACY (3)**

Presents the basic use of tools and materials that stimulate imagination, reasoning and concept formation in language developments. Students are given an overview of literacy experiences for young children throughout the day, the continuum of reading and writing development from birth and beyond, and specific ways to incorporate literacy into playing, reading, talking, writing, and learning.

### **ECD115 CHILD SOCIAL/EMOTIONAL DEVELOPMENT (3)**

Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Course is an overview of childhood behavior, interaction/relationships, environments and its effects on social and emotional development. Behavior and guidance concerns of children and problems facing adolescents and adults are addressed.

**ECD117 CREATIVE EXPRESSION AND PLAY (3)** Presents the development of creative expressions in the young child through activities such as music, art and dance, and their incorporation into the daily curriculum. The value of children's play and discovery as learning opportunities will be emphasized.

### **ECD121 CURRICULUM STRATEGIES FOR EARLY CHILDHOOD (3)**

Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores and ECD101, ECD107 and ECD109. Course is an examination of techniques, learning activities and materials used to teach young children with an emphasis on planning and implementing a developmentally appropriate curriculum utilizing Constructivist theory.

### **ECD125 INTRODUCTION TO SPECIAL INDIVIDUALS (3)**

Presents an introduction to characteristics of exceptional individuals and educational history and theories with exceptional individuals, especially children. Study will include effects of disability on adjustment to home, school, community, and on families of young children. It will include an overview of federal and state systems of support for children with special needs.

### **ECD127 PARENT/TEACHER INTERACTION (3)**

Course presents the principles of child development with family relationships applied to group and individual work with parents. It is intended to help providers in developing skills that will help them effectively relate to parents. Topics will

include: communication techniques, children's fears, discipline, nutrition, and school/community resources.

**ECD129 ADMINISTRATION IN EARLY CHILDHOOD CARE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores and ECD101 through ECD127. Course presents the operation of childcare facility including staff relations, budgeting, ordering, planning, and evaluation of center operations. Early childhood care center ethics, funding opportunities, licensing, curriculum, and parent involvement will also be incorporated into this course.

**ECD131 CHILD DEVELOPMENT PORTFOLIO ASSESSMENT PREPARATION (3)** Prerequisites: ECD101, ECD107 and ECD109 taken concurrently. A step-by-step approach of the activities necessary to complete the Child Development Associate requirements. Course is a review of the functional areas along with an emphasis on the general understanding of the physical, social, emotional, language and cognitive development of early childhood. The competencies required and the assessment process are considered important components of this course.

**ECD175 CHILD CARE PRACTICUM (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores and ECD101 through ECD127. Must have instructor approval to register for the class. This capstone course puts early childhood skills and knowledge into practice in an early childhood setting.

## COMPUTER AIDED DRAFTING

**CAD105 PRINT READING (3)** Course is designed for students in technical programs that require an understanding of basic mechanical drawing, architectural print reading, and welding symbols. Students will gain knowledge of orthographic projection, geometric construction, section views, auxiliary views, and technical notation, dimensioning and tolerancing. Students will understand architectural plot plans, floor plans, elevations, schedules, and wall and building sections. Included is the interpretations of drawings, welding symbols, notations, and technical information.

**CAD111 INTRODUCTION TO COMPUTER DRAFTING (3)** An introduction to Computer Aided Drafting (CAD) software. Students will gain knowledge in the use and principles of CAD. Manual drafting concepts and tools will be discussed. The main emphasis will be the application of AutoCAD software. Specific hardware used in the CAD environment will be introduced and utilized. Basic concepts covered include drawing setup, two-dimensional entity creation, coordinate entry methods, and drawing aides.

**CAD113 INTERMEDIATE COMPUTER DRAFTING (3)** Prerequisite: CAD111 or consent of the instructor. A continuation of CAD111 emphasizing the principles of drafting utilizing Computer Aided Drafting (CAD) software. Students will gain knowledge of drafting fundamentals, drafting techniques and skills, descriptive geometry, CAD application, and drafting and design applications. The student will apply the knowledge of the principles of drafting using AutoCAD software. Section views, pictorial drawings, auxiliary views, text, dimensioning and tolerancing will be covered in this course.

**CAD115 ADVANCED COMPUTER DRAFTING (3)** Prerequisite: CAD113 or consent of instructor. An

introduction to three-dimensional drawings and modeling, wire frame modeling, surface modeling, rendering, and solid modeling using AutoCAD software. Course will cover the necessary skills to become proficient in working with three-dimensional objects in preparation to meet the requirements of a CAD technician.

**CAD116 COMPUTER DRAFTING PROGRAMMING (3)** Prerequisite: CAD115 or consent of instructor. A thorough study of customizing AutoCAD software. Course will cover customizing of menus and creating slides and scripts. The use of the AutoLISP and visual basic programming language as customizing tools will be introduced. The importing and exporting of drawing information through digitizing, raster image files and database connectivity will also be covered.

**CAD120 ARCHITECTURAL DRAFTING (3)** Course introduces students to the uses of Computer Assisted Drafting (CAD) as it relates to architectural design. This course will cover the use of CAD in preparing construction documents and three-dimensional models of buildings. Architecture terminology, building techniques, building conventions, building design, and architecture-related information will be introduced.

**CAD125 ARCHITECTURAL APPLICATIONS (3)** Prerequisite: CAD113 or CAD120 or consent of instructor. An architectural modeling and drafting course utilizing popular 3D CAD software application(s). Course uses commercial based architectural software to model walls, doors, windows, floor plans, roof, kitchen appliances, bathroom fixtures and other components of a building. The student will generate dimensioned plans, sections, elevations and wall sections from the 3D digital model. Students will also create a digital walk-through and rendered images of the model.

**CAD130 SOLID MODELING I (3)** An entry level solid modeling and design course. Students will gain an understanding of 3D and parametric solid modeling using Autodesk Inventor. Included are: the development and generation of 2D sketches, 3D solid models, assemblies, creation of multi view drawings from solids geometry, analyzing solids, shading and rendering topics, and the development of physical models with rapid prototyping equipment.

**CAD132 SOLID MODELING II (3)** Prerequisite: CAD115, or CAD130 or consent of instructor. A continuation of CAD130. Students will gain an understanding of different 3D and parametric solid modeling applications using SolidWorks and Inventor. Studies include the development and generation of advanced 2D and 3D sketches, solid models, assemblies, and the creation of complex and detailed drawings, analyzing and testing solid models, and the development of physical models with rapid prototyping equipment.

**CAD134 CAD/CAM (3)** Prerequisite: CAD130 or consent of instructor. Course teaches principles of Computer Aided Machining (CAM) and Computer Numerical Controlled (CNC) machining including Wire EDM, lathes and mills utilizing FeatureCAM and other CAD/CAM software. Students will design 3D parts, generate CAM code, tool paths and graphically verify tool paths. Students will develop physical models with rapid prototyping and CNC equipment.

**CAD136 ENGINEERING GRAPHICS (3)** Prerequisite: CAD115. A capstone of the series of classes utilizing AutoCAD software. Students will gain knowledge of pictorial drawings, geometric dimensioning and tolerancing, drawings for numerical control, welding drawings, design concepts, belts,

chains, and gears, couplings, bearings, and seals, developments and intersections, pipe drawings, structural drafting, jigs and fixtures, electrical and electronics drawings.

**CAD155 3D VISUALIZATION (3)** Explores the creation of photo realistic 3D objects and animation using Autodesk 3D VIZ software. Course covers the necessary skills to become proficient in working with three-dimensional objects and animations. Course includes creating a scene, creating shapes, modifying splines, lofting objects, twisting objects, creating curved paths, deformation tools, creating objects, materials, and 3D animation and rendering.

**CAD175 CAD INTERNSHIP (4)** Prerequisite: CAD115. A cooperative work experience within an industry setting for CAD students. Students work under the supervision of an approved professional/specialist in the CAD field. The instructor is a coordinator between the student and the employer, and monitors the internship. A minimum of 160 work (clock) hours on the jobsite is required for successful completion of the course. The student submits progress reports and a final report documenting the work experience.

**CAD180 PROBLEMS IN CAD (3)** Prerequisite: CAD115. An independent study of special problems and/or projects in CAD under instructor supervision. A capstone course to promote critical thinking skills and technical resourcefulness while allowing the student to broaden their CAD skills.

## COMPUTER APPLICATIONS

**CAPP110 INTRODUCTION TO KEYBOARDING (1)** Individualized course which provides the student with a mastery of touch-typing. Emphasis is placed on developing speed and accuracy through instruction, guided practice, and timed writings. Optional test out. Course is not intended for medical office or office management majors.

**CAPP112 SPECIAL PROBLEMS IN BASIC KEYBOARDING - A CONTINUATION (1)** Class is for students who have credit for Introduction to Keyboarding and need the equivalent of the next level of instruction. Business documents, as well as increased speed and accuracy, are the focus of the class.

**CAPP114 BASIC KEYBOARDING (2)** Individualized course which provides the student with a mastery of touch-typing. The keying of mailable business letters, memos and reports is included. Optional test out. Course is not intended for medical office or office management majors.

**CAPP116 SPECIAL PROBLEMS IN KEYBOARDING - A CONTINUATION (1)** Class is for students who have credit for Basic Keyboarding and need the next level of instruction. Business documents, as well as increased speed and accuracy, are the focus of the class.

**CAPP118 KEYBOARDING (3)** Individualized course provides the beginning student with a mastery of touch-typing and an introduction to basic formats of letters, memos, tables, and reports. Optional test out.

**CAPP119 DOCUMENT FORMATTING (2)** Prerequisite: CAPP118. Individualized course which includes processing various business and professional documents and forms. Emphasis is placed on accuracy, speed development and ability to follow directions. Optional test out.

**CAPP125 MICROCOMPUTER APPLICATIONS (3)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Prerequisite knowledge: CAPP114 or CAPP118 recommended or demonstrated keyboard proficiency. Operations of personal computers through the use of Microsoft Office Professional software are presented. Applications include fundamentals of word processing, spreadsheets, database management and presentations. Includes hands-on instruction in the computer lab.

**CAPP160 WORD (3)** Prerequisite: CAPP125 with a grade of C or better and taken within the last five years of continuous enrollment. Course is designed for Windows users who seek further knowledge of the word processing program, Microsoft Word. Includes hands-on instruction in the computer lab.

**CAPP162 DESKTOP PUBLISHING (3)** Prerequisite: CAPP125 taken within the last five years of continuous enrollment and CAPP118 recommended. Introduction to the basics of electronic page layout using professional publishing software. The student also gains valuable skills in image scanning and manipulation and merging text and graphics.

**CAPP164 ACCESS (3)** Prerequisite: CAPP125 with a grade of C or better and taken within the last five years of continuous enrollment. Course is designed for Windows users who seek further knowledge of the database program, Access. Includes hands-on instruction in the computer lab.

**CAPP166 EXCEL (3)** Prerequisite: CAPP125 with a grade of C or better and taken within the last five years of continuous enrollment. Course is designed for Windows users who seek further knowledge of the spreadsheet program, Excel. Includes hands-on instruction in the computer lab.

## COMPUTER INFORMATION SYSTEMS

**CIS103 INTRODUCTION TO CIS (3)** Course teaches the skills necessary to understanding the logic of computer programming, design and structure. Students will be presented effective tools needed to enhance their knowledge of using the latest innovations in technology.

**CIS124 DATABASE MANAGEMENT (3)** Course implements the relational database management system tasks. Topics include creation of databases, storing, lists and displays, indexing, report generating, creating labels, constructing screens, programming skills, control structures, menus, multi file programming, and special techniques.

**CIS132 UNIX (1)** Instruction demonstrates the proficient use of a multi-task, multi-user disk operating system of Unix. Students will learn to create folders and files, assign permissions, write programs, and perform system maintenance tasks.

**CIS145 VISUAL BASIC (3)** Course provides an introduction to programming within a graphical environment. Application development will focus on the process of designing, building and maintaining projects that may be used within a business setting. The end product will increase the efficiency and productivity of the organization.

**CIS148 COBOL (3)** A computer programming course that will use the COBOL programming language in a business environment. Instruction will include data editing, arithmetic

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calculations, If/Then structures, loop processing, conditional statements, control level breaks, tables, and evaluate statements.

**CIS149 ADVANCED COBOL (3)** Prerequisite: CIS148. Advanced Cobol programming techniques are presented in this course. Instruction covers tables, call statements, multi-file processing, and end-user interaction.

**CIS151 DB2 RELATIONAL DATABASE (3)** Prerequisite: CIS148. Course prepares students for programming in the DB2 environment. DB2 is a relational database. A substantial portion of the course will use SQL statements.

**CIS155 PROGRAMMING IN C (3)** Programming language C is introduced as an application programming language. Top-down program development methodologies are discussed. Students learn different C language features to develop application programs.

**CIS157 ADVANCED C/C++ PROGRAMMING (3)** Prerequisite: CIS155. Course presents advanced C/C++ programming techniques. Instruction includes data manipulation, file handling, and logic processing.

**CIS158 JAVA (3)** Introduction to object-oriented programming with a major emphasis in developing GUI based applications for business problems and Web pages.

**CIS161 SYSTEMS ANALYSIS (3)** Content includes the analysis and identification of multi-user computer system development. Documentation of systems requirements is stressed.

**CIS162 ADVANCED VISUAL BASIC (3)** Prerequisite: CIS145. Course is for the experienced Visual Basic programmer who would like to program commercially in Visual Basic. Extensive use of file handling is involved. The course covers object linking and multiple document interfaces.

**CIS163 SQL SERVER (3)** Prerequisite: CIS145. Course is designed to teach extensive database administration. As databases are an integral part of interactive Web and business design, the course will be useful for commercial development. Extensive use of SQL commands will be covered.

**CIS164 ORACLE I-ORACLE SQL (3)** Course provides the fundamental skills in SQL with additional coverage of Oracle's implementations of SQL. This course is designed to provide a practical working knowledge of essential Oracle database skills and technologies.

**CIS165 ORACLE II-PL/SQL (3)** Course instructs the student in topics related to Oracle PL/SQL (Procedure Language/Structured Query Language). Subjects will include invoker's rights, object patterns, database management, and Java libraries.

**CIS168 GAME PROGRAMMING (3)** Fundamentals of how to write computer games in the C++ programming language using Direct3D, DirectSound, DirectX, and DirectInput. Students will receive knowledge of game programming using 3D modeling, collision detection, and animation. No previous knowledge of HTML or Web Design is assumed. Students are required to purchase a mass storage device such as a thumb or jump drive.

**CIS169 ADVANCED JAVA (3)** Prerequisite: CIS158. Project oriented programming course which builds upon the knowledge presented in CIS158. Topics will include database

connectivity, sockets, advanced GUI programming, multi-threading, and data structures.

**CIS175 CIS INTERNSHIP (4-8)** Includes a minimum of 160 clock hours of supervised work experience that allows the student to apply CIS operation and programming theory. Recommended to be taken during the last year of study.

**CIS179 PROGRAMMING PROJECT (4)** Must be taken during the last semester of study before completion of the CIS degree. Includes individually designed assignments that require the students to develop and test a program and document program results.

**CIS180 PROBLEMS IN COMPUTER INFORMATION SYSTEMS (1-3)** Independent study of a special problem in computer systems arranged under the supervision of a CIS instructor.

**CIS185 PROJECT MANAGEMENT (3)** Prerequisite: CAPP125. Course to assist students to adapt to the change taking place in the programming field. The course will assist students in writing specifications and in understanding project time for outsourcing.

## CONSTRUCTION TECHNOLOGY

**CNST101 CONSTRUCTION MATERIALS AND METHODS I (3)** Provides basic knowledge of construction materials, their properties, their uses and limitations, and the way they are properly installed. Course teams with Construction Materials and Methods II to cover all the topical areas necessary for a student interested in construction and/or architecture. The topical areas are not sequential (for example the study of wood products does not have to proceed the study of concrete) and so a student does not have to take CNST101 before CNST103 but if the student wants complete knowledge of all major materials they do need to take both courses.

**CNST103 CONSTRUCTION MATERIALS AND METHODS II (3)** Course teams with CNST101 to provide the student with a basic knowledge of construction materials, their properties, their uses and limitations, and the way they are properly installed. The topical areas are not sequential and a student can take CNST103 before taking CNST101 but, if the student wants a complete knowledge of all major materials they need to take both courses. Course also includes 12 clock hours of work dealing with construction related surveying and layout.

**CNST106 CONSTRUCTION ESTIMATION (3)** Examines the methods used in construction estimation. Conceptual as well as detailed estimating will be examined. Quantity takeoff methods dealing with length, area and volume will be used. Costs for material, labor and equipment will be covered. Estimation software will be used in this course. Cost data from publication services such as Means and Dodge Reports will also be used. The course will require the completion of a commercial cost estimate.

**CNST113 CONSTRUCTION MANAGEMENT (3)** Topics covered include: the construction industry, types of construction, careers in construction, construction contracts, legal structure of construction companies, project planning, project bidding, equipment productivity, people productivity, construction labor issues, construction estimation, construction materials, and construction safety.

**CNST138 CONSTRUCTION PLANNING AND SCHEDULING (3)** Covers the concepts of: activity definition, activity

duration, bar charts, network diagrams, ordering activities, critical path analysis, early and late start/finish time, I and J nodes, assigning resources and costs, expediting a project, precedence diagrams, accurately determining activity durations, time in contract provisions, project monitoring and control, and computer scheduling.

**CNST140 CONSTRUCTION METHODS (3-6)** Students will study the methods used to install various construction materials broken down into the 16 major areas of the Construction Specification Institute (CSI) format. These areas include: site work, concrete, masonry, metals, woods and plastics, moisture and thermal control, doors and windows, finishes, specialties, equipment, furnishings, special construction, mechanical, and electrical.

**CNST142 BUILDING MECHANICAL SYSTEMS (3)** Basic understanding of the components and design of major building mechanical systems. Will include: water supply, water drainage, private sewage disposal, heating and cooling, solar energy, electrical systems, lighting, fire protection, sound control, and systems to move people (elevators and escalators).

**CNST160 STATICS AND STRENGTH OF MATERIALS (3)** The first section of this course is a study of the effects of forces acting on rigid bodies at rest. In this section the student will study: forces and force systems, truss analysis, center of gravity, moment of inertia, stress, strain, shear, bending, beam design, column design, and connection. The second portion will deal with strength of materials. The student will examine the structural properties of various construction materials (for example, steel, concrete, wood, and plastic). The student will find engineering data from various standard sources and apply this information to beam, column and connection problems.

**CNST162 CONSTRUCTION SAFETY (3)** Students will study construction accidents and safety. Additional topics will include: liability and safety regulation, OSHA, safety standards and codes, promoting safety, safety appraisal on the job site, accident investigations, fall prevention, toxic construction materials, fire, excavation safety, heavy equipment safety, vibration, and noise.

**CNST175 CONSTRUCTION MANAGEMENT INTERNSHIP (4-8)** The student will read materials to prepare them for construction job site management. The student, instructor and employer will develop a training program. The instructor will monitor the student's progress during the internship. The student will complete weekly progress reports and maintain an internship manual and write a report summarizing their work experience.

## CRIMINAL JUSTICE

**CJ101 INTRODUCTION TO LAW ENFORCEMENT (3)** Examines the history of policing in the United States and an overview of the relationship between law enforcement and the American society. This will include an examination of the duties of law enforcement officers, the operations of police agencies, police-community relations, the police subculture, and the need for police objectives to conform to constitutional procedures.

**CJ102 INTRODUCTION TO CRIMINAL JUSTICE (3)** The history, development and function of the criminal justice system in America. Will examine the three major components

of the system - police, courts and corrections - as well as their interrelationships.

**CJ104 CRIMINAL INVESTIGATION (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores and CJ102. Theory, methods and procedures of criminal investigation with attention given to its historical origins, the investigator, organization and management of the investigative function, and various investigative methods such as crime scene investigation, techniques of interviewing, collection of evidence, suspect development, and case preparation.

**CJ105 CRIMINAL LAW (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores and CJ102. Examines criminal, common and statutory law with its application to the criminal justice system. Emphasis will be placed on the classification of crime and criminal behavior including the necessary elements and mental states of criminal acts. Will also examine criminal acts based on Missouri criminal statutes.

**CJ107 CRIMINOLOGY (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores and CJ102. Examines the various theories of criminal behavior and crime causation as well as the problems of treatment, corrections, and control of crime. Will also look at patterns of crime, research methods, and the response to criminal behavior.

**CJ109 JUVENILE DELINQUENCY (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Examines the origins, philosophy and objectives of the juvenile justice system in America including the concept of juvenile delinquency and its causes, juvenile case dispositions and juvenile detention procedures. Will place close attention on the organization, function, and jurisdiction of juvenile justice agencies and the application of the Missouri Juvenile Code.

**CJ111 INTRODUCTION TO CORRECTIONS (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. History, development, and present components of both institutional and community-based corrections in America.

**CJ115 PROCEDURAL LAW (3)** Prerequisites: CJ102 and CJ105. Course will examine the U.S. Constitution, court cases, statutes, and other sources of regulation in the field of criminal procedure. These regulatory documents will be examined and considered as to how they apply to criminal law and the administration of justice. Specific issues to be covered include search and seizure, interrogations and confessions, grand jury investigations, identification procedures, and the right to counsel.

**CJ118 CRIMINAL JUSTICE COMMUNICATIONS (3)** Prerequisites: CJ102 and ENGL101. Course will provide direction and guidance for students seeking an entry-level career in law enforcement and corrections in the areas of written and verbal communication. Provides instruction in reporting factual information in an accurate and proper format. In addition to reinforcing basic writing skills, it will stress the components of typical police writing formats. Students will also explore topics such as interviewing/interrogation techniques and courtroom testimony.

**CJ122 CURRENT EVENTS IN CRIMINAL JUSTICE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or

better or equivalent placement scores and CJ102 and approval from instructor. Course will provide an intensive examination of major issues affecting the criminal justice system and its interaction with society and the democratic process. Topics include capital punishment, terrorism, drug abuse, and the victims of crime. Course will utilize lecturers with extensive training and knowledge in the topic areas to provide students with information concerning societal issues affecting the criminal justice system and professionals. Students need computer/Internet access to complete this course.

**CJ175 SUPERVISED OCCUPATIONAL EXPERIENCE IN CRIMINAL JUSTICE (4)** Course provides students with the opportunity to observe and experience the operation of a selected agency within the criminal justice system. This program will require the student to spend a minimum of 160 hours with the agency during the semester as well as the completion of other requirements for the instructor. Course does not meet as a regular class, but does require correspondence with the instructor. Additional requirements for participation in this course include: student must be seeking a degree in criminal justice at State Fair Community College and have completed at least two semesters of course work including a minimum of nine hours of approved criminal justice classes including CJ102 or CJ111. Students interested in this course should contact the Criminal Justice program coordinator prior to enrolling to ensure all criteria are understood and have been met.

**CJ180 PROBLEMS IN CRIMINAL JUSTICE (1-3)** Prerequisites: CJ102 and permission of Criminal Justice program coordinator. Independent study of a special problem in criminal justice under the direct supervision of a criminal justice instructor.

## DENTAL HYGIENE

**Students must be admitted to the dental hygiene program to register for DH courses.**

**DH105 INTRODUCTION TO DENTAL HYGIENE (6)** Course is designed to acquaint the student with the role of a dental hygienist and provide the background knowledge and skills necessary to function in subsequent dental hygiene clinical courses. Basic principles of instrumentation, infection control and patient communication are presented in this course.

**DH106 DENTAL CLINIC EMERGENCIES (1)** Course presents procedures to properly control bleeding, choking, possible broken bones, and other common medical emergencies as well as emergencies specific to the dental office. Information is also included concerning emergency medications used in the dental office. Adult, child and infant CPR, choking, and child and adult AED are included. Upon successful completion of this course, the student will receive certification from the American Red Cross for First Aid and certification from the American Heart Association for Health Care Provider CPR/AED.

**DH107 DENTAL RADIOGRAPHY (2)** Prepares the student with the skills necessary for exposing and processing dental radiographs. Biological and safety procedures are discussed and skills are practiced on mannequins prior to proceeding with clinical patient exposures. Students are also introduced to the basics of interpreting landmarks and technique errors on dental radiographs. The student will also be exposed to digital radiography technology.

**DH109 ORAL ANATOMY AND HISTOLOGY LAB (1)** Course consists of a lab manual with handouts and activities that are

congruous with the lecture presented by Interactive Televisions from Northcentral Technical College in Wausau, Wisconsin. Grading is based upon tooth identification through ID tests and several projects, including a skull project where the student will be drawing arteries and veins on a skull as well as molding with clay.

**DH110 CLINICAL DENTAL HYGIENE I (6)** Prerequisite: DH105. Course is designed to apply the basic principles of dental hygiene instrumentation and patient treatment in a clinical setting. The principles of ultrasonic scaling, instrument sharpening and patient education will be introduced and built upon as the semester progresses. The student will also refine calculus detection. The student will be introduced to the concept of complete data assessment and use of the data to formulate patient care plans. Gingival, plaque and bleeding indices will be used to describe patient conditions. The clinical method of instruction and evaluation is competency-based.

**DH112 CLINICAL DENTAL HYGIENE II (4)** Prerequisite: DH110. Course continues skill development in the provision of dental hygiene care. Administration of local anesthesia is added to the skills to be developed. Students continue to develop care plans which emphasize data assessment, analysis of risk factors and sequencing of care. The classroom portion will emphasize the management of medically compromised patients. The clinical method of instruction and evaluation is competency-based.

**DH114 CLINICAL DENTAL HYGIENE III (8)** Prerequisite: DH112. Course continues skill development in the provision of dental hygiene care. Clinical emphasis will be on the treatment of periodontally advanced cases. The classroom portion will deal with the management of patients with special physical, mental, social and emotional needs, and continuation of content regarding patients with medically compromised conditions. The clinical method of instruction and evaluation is competency-based.

**DH116 CLINICAL DENTAL HYGIENE IV (8)** Prerequisite: DH114. Dental hygiene skills will be perfected in this course. Non-surgical periodontal techniques and other supplemental care procedures will be emphasized in the classroom. Students will be encouraged to make clinical decisions based on the evidence and will learn to critically evaluate the literature. Didactic instruction will be case-based. The clinical method of instruction and evaluation is competency-based.

**DH118 PRINCIPLES OF PERIODONTICS (2)** Biological and clinical aspects of periodontal health and pathology. An introduction to the supporting structures of the teeth will provide the foundation for understanding pathogenesis, histopathology and subsequent therapeutic treatment of periodontal diseases. The dental hygienist's role in recognition, prevention and treatment of periodontal diseases and maintenance of periodontal health is examined. The student will be immersed in a variety of educational settings and evaluation techniques through classroom cooperative learning and topic presentation as well as synthesis of knowledge with an actual clinic patient.

**DH119 ADVANCED PERIODONTICS PRACTICUM (1/2)** Course gives the dental hygiene student a firsthand experience in specialty practices of periodontics. Area periodontists and general practitioners will give of their time and expertise to guide the student through actual surgical procedures, such as periodontal surgery and implantology to solidify the conceptualization of the classroom experience.

**DH120 DENTAL BIOMATERIALS W/LAB (2)** Students will study the chemistry of biomaterials used in the oral cavity and how to discern what products to use when taking impressions, creating study models, polishing resin or alloy filling, and delivering dental sealants. Students will use alginate materials to take an impression and resins to produce a dental sealant. Other activities include personal mouth protection devices, placing a rubber dam, polishing a restoration, mixing cements, dental alloys and impression materials, as well as using periodontal dressing and removing sutures.

**DH124 APPLIED NUTRITION AND ORAL HEALTH EDUCATION (2)** Course will present the sources and uses of nutrients and provide a biochemistry background for the metabolism of these dietary components. The course will prepare the dental hygiene student to fulfill his/her role in oral health education as it relates to patient home care habits, motivation and dietary effects on the oral cavity.

**DH125 LOCAL ANESTHESIA (3)** Course is designed to prepare dental hygiene students for the safe, effective administration of local anesthesia. Included are content areas in anatomy, physiology, pharmacology, and emergency management. Laboratory sessions provide actual experiences in administration of local anesthetics.

**DH126 COMMUNITY DENTAL HEALTH (1)** Provides a study of the principles of public health and the methods used in assessing, planning, implementing, and evaluating dental health programs. In addition, content will include basic principles of research.

**DH127 COMMUNITY DENTAL HEALTH LAB (1)**  
Prerequisite: DH126. This course will allow the student to apply the basic principles of assessing, planning, implementing, and evaluating a community dental health program. The student will participate in health fairs, screenings, educational programs, and table clinic presentations. Two hours of community lab activities per week.

**DH130 PHARMACOLOGY (2)** Provides basic drug terminology, general principles of drug interactions, routes of administration, adverse reactions, and drugs that alter dental treatment. Emphasis will be placed on knowledge of drugs in the understanding of a patient health history and development of a care plan.

**DH132 DENTAL HYGIENE ETHICS AND LEGAL ISSUES (2)**  
Designed to provide the student with knowledge of professional development, ethics and jurisprudence as related to clinical practice. Topics will include the basic principles of ethics, conflict management, state dental laws, and legal liabilities of health care professionals.

## EARTH SCIENCE

**EASC101 INTRODUCTION TO EARTH SCIENCES W/LAB (5)**  
Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Course concentrates on understanding the earth's dynamic environments through the scientific study of processes and physical and human interactions related to geology, meteorology and astronomy. Lab includes introduction to minerals and rocks, fossils, fundamental principles of weather, and basic astronomy. Local field trips are included. Instruction consists of four lecture and two lab hour per week.

**EASC106 PHYSICAL GEOLOGY W/LAB (5)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Provides an understanding of the forces which were active in the formation of the earth, the processes whereby the surface of the earth is sculptured, the identity of earth materials, with the location and value of the earth's resources. Laboratory includes a study of minerals and rocks and the interpretation of topographic and geologic maps. Local field trips are included. Instruction consists of four lecture and two lab hours per week.

**EASC116 ENVIRONMENTAL SCIENCE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Non-lab course introduces environmental concepts and problems. Topics will include basic ecology, human population ecology, natural resources, and pollution. Students will learn how man interacts with his environment.

**EASC120 INTRODUCTION TO ASTRONOMY (3)**  
Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Non-lab course is an introduction to our present knowledge of the universe. Topics include the solar system, stellar astronomy and the structure of the universe.

**EASC180 PROBLEMS IN EARTH SCIENCE (1-3)** Independent study of a special problem in earth science under the supervision of a science instructor.

## ECONOMICS

**ECON101 PRINCIPLES OF ECONOMICS I – MACRO (3)**  
Prerequisites: BSKL015 and BSKL061 or equivalent placement scores. Examines the economy as a whole, with an emphasis on how scarcity affects a nation. Topics include: understanding and measuring economic growth, government spending and taxation, monetary and fiscal policy, unemployment and inflation, and exchange rates.

**ECON102 PRINCIPLES OF ECONOMICS II – MICRO (3)**  
Prerequisite: ECON101. Applies economic principles to specific areas of the economy. Topics include: markets and efficiency, costs of production, wage determination, special problems of agriculture and health care, technology, free trade and the impact of government intervention.

**ECON180 PROBLEMS IN ECONOMICS (1-3)** Independent study of a special problem in economics under the supervision of an economics instructor.

## EDUCATION

**EDUC205 TEACHING PROFESSION WITH FIELD EXPERIENCE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Course provides an opportunity to observe teaching and learning for 30 hours or more in P-12 classrooms. Students are introduced to the requirements for teacher preparation and certification. Students will examine characteristics of effective teaching. Course is designed to assist students in determining if a career in teaching is an appropriate goal.

**EDUC209 FOUNDATIONS OF EDUCATION (3)**  
Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Course examines the historical, philosophical, sociological, political, economic, and legal foundations of the American public education system.

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Students will explore the nature of school environments, design and organization of school curricula and characteristics of effective schools and instruction in grades P-12. Educational structures, practices and projections for the future will be studied.

**EDUC212 TECHNOLOGY FOR TEACHERS (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Students will learn to integrate instructional technology into the P-12 classrooms. Students will study a variety of software programs, presentation technology and telecommunication tools. The focus will also be on social, ethical, legal and human issues surrounding the use of technology.

**EDUC218 CHILDREN'S LITERATURE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Intensive introduction to various genres of literature for children and ways of presenting literature in preschool, elementary school or middle school.

**EDUC220 EDUCATIONAL PSYCHOLOGY (3)** Prerequisite: PSY101 or PSY102. Course is designed to help students relate the application of psychological principles to teaching, learning and assessment and the educational practice in P-12 classrooms. It will focus on the learner and the learning process, teacher characteristics, and classroom processes that increase student motivation. Student diversity and appropriate instructional strategies for students with special needs will also be introduced.

## ENGLISH

**ENGL101 ENGLISH COMPOSITION I (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. With its emphasis on planning, drafting and revising, this course addresses critical thinking and information management skills and their role in communicating concise written ideas to a range of audiences for a variety of purposes. Basic computer skills are essential for successful completion.

**ENGL102 ENGLISH COMPOSITION II (3)** Prerequisite: ENGL101 with a grade of C or better. Combining process writing techniques acquired in English Composition I with an emphasis on critical reasoning, students will find real-life relevance in the act of managing information: retrieving it from a variety of sources and evaluating, analyzing, and combining it with other sources to communicate ideas in meaningful and articulate writing. Basic computer skills are essential for successful completion.

**ENGL106 CREATIVE WRITING (3)** This elective course includes study and practice in the techniques of writing poetry, fiction, nonfiction, and/or drama. Emphasis is placed on the recognition of those techniques in published works and the utilization of them in student's own writing. Peer evaluation and individual conferences with the instructor are employed.

**ENGL110 BUSINESS COMMUNICATIONS (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores, and CAPP125. Students will learn effective communication techniques and demeanor as applied in business situations. Topics may include the communication process, various business letters, oral presentations, and international communication.

**ENGL112 TECHNICAL WRITING (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent

placement scores. Explores the theory and practice of workplace writing, emphasizing both practical applications and individual/collaborative decision-making. Includes practice in writing newsletters, instructions, and research-based proposals and reports. All writing, including use of graphics and visual aids, is done on computer.

**ENGL180 PROBLEMS IN WRITING (1-3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Independent study of a special problem in the area of research-based writing or creative writing under the supervision of an instructor in the department.

## FRENCH

**FREN101 ELEMENTARY FRENCH I (3)** Students will develop the four basic skills of language communication: listening, speaking, reading, and writing. Course includes an introduction to the French culture.

**FREN102 ELEMENTARY FRENCH II (3)** Prerequisite: FREN101 or one year of high school French. Continuation of FREN101 for further development of the four basic skills of language communication: listening, speaking, reading, and writing. Includes a continuation of culture appreciation.

**FREN201 INTERMEDIATE FRENCH I (3)** Prerequisite: FREN102 or two years of high school French. This course continues the study of French language and culture with a focus on communication and proficiency.

**FREN202 INTERMEDIATE FRENCH II (3)** Prerequisite: FREN201 or three years of high school French. This course continues the study of French language and culture with a focus on communication and proficiency.

**FREN210 SPECIAL TOPICS IN FRENCH (1-3)** Prerequisites: FREN101, FREN102, FREN201, and FREN202 or consent of instructor. Independent study under the supervision of a French instructor.

## GEOGRAPHY

**GEOG101 WORLD GEOGRAPHY (3)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Survey of the major topical elements of geography with additional emphasis on environmental awareness and place-name geography. Designed for prospective elementary and social studies teachers, as well as general education students.

**GEOG103 INTRODUCTION TO GPS/GIS (3)** Introduction to GPS/GIS is a project oriented survey course of Global Positioning Systems (GPS) and Geographic Information Systems (GIS). A portfolio of projects will be assembled and evaluated. These projects will include a student selected project.

## HEALTH

**HLTH101 PERSONAL HEALTH/FITNESS (2)** Presents a basic knowledge of physical fitness and personal fitness, the human body, personal hygiene, food and nutrition, diet and weight control, mental health, alcohol, narcotics and drug abuse education, protection against communicable diseases, and

other health hazards. Course fulfills wellness requirement for A.A. or A.A.S.

**HLTH102 FIRST AID (2)** Prepares the student to make appropriate decisions regarding first aid care in minor or life-threatening situations. Class focuses on basic first aid techniques and when to call the EMS. CPR and relief of airway obstruction for the adult, child and infant, as well as use of the AED for the adult and child, is included in the course. American Red Cross certification cards are given for First Aid and CPR upon completion of the class.

## HEALTH OCCUPATIONS

**HEOC101 MANAGING MEDICAL EMERGENCIES (1)** Presents procedures to properly handle bleeding, choking, possible broken bones, and other common medical emergencies. CPR instruction approved by the American Red Cross is included. Upon successful completion of the Basic Cardiac Support training and first aid, cards of verification are awarded.

**HEOC135 ALLIED HEALTH CAREER DEVELOPMENT (1/2)** Designed to help the learner to develop career potential. The learner will go through the job search process step-by-step. Guest speakers, group activities and mock interviews will be utilized and resumes will be constructed. Internet sites to assist in resume writing and job searches will be explored.

**HEOC140 TECHNOLOGY IN HEALTH CARE (3)** Course focuses on providing a foundation of information management and processing principles used to support the data, information and knowledge needs in the provision and delivery of nursing and health care. Examines using technology to improve the quality of health care as it is delivered to the client, utilized by the provider, and needed to meet the mission of an institution.

**HEOC180 PROBLEMS IN HEALTH OCCUPATIONS (1-3)** Independent study of a special problem in allied health under the supervision of an allied health instructor.

## HISTORY

**HIST101 U.S. HISTORY BEFORE 1877 (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Survey of the political, economic and social development of the United States from its European origins through the Reconstruction Process. A study of the Missouri Constitution is included to meet the state's requirements in Senate Bill No. 4.

**HIST102 U.S. HISTORY SINCE 1877 (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Survey of the political, economic, social, and military development of the United States from 1877 to the present. A study of the Missouri Constitution is included to meet the state's requirements in Senate Bill No. 4.

**HIST108 WORLD CIVILIZATION BEFORE 1500 (3)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Survey of the political, social, military, cultural, and religious history of Europe, Asia and Africa from prehistoric man to 1500.

**HIST109 WORLD CIVILIZATION SINCE 1500 (3)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Survey of the political, social, military, cultural, economic, and ideological history of Europe, Asia and Africa from 1500 to the end of the Cold War.

**HIST180 PROBLEMS IN HISTORY (1-3)** Independent study of a special problem in history under the supervision of a social science instructor.

## INDUSTRIAL ELECTRICAL MAINTENANCE

**IEM102 ELECTRIC FUNDAMENTALS (3)** Introduction to electrical theory. Topics include direct current, alternating current, electrical quantities and values, Ohm's Law, electric generation, energy conversion, magnetism, electromagnetism, series, parallel, and combination circuits.

**IEM104 ELECTRICAL POWER (3)** Prerequisite: IEM102. Continuation of electrical studies in AC, inductance, capacitance, reactance, power factor and the application of electrical power in industry, single and poly-phase transformers, and WYE and DELTA systems.

**IEM106 INDUSTRIAL MECHANICS (3)** Principles and applications of industrial mechanics: tools, hardware, installation and maintenance of bearings, gear systems, belt drives, mechanical drives, principles of lubrication, vibration, and alignment.

**IEM108 FLUID POWER TECHNOLOGY (3)** Principles and applications of fluid power technology in industrial systems: operation, troubleshooting and maintenance of hydraulic and pneumatic pressure, flow, directional control, and electrical devices, conduits, pumps, compressors, actuators and ancillary devices, conditioning and filtration of fluids. Critical thinking and analytical skills are emphasized.

**IEM110 DIGITAL PRINCIPLES AND APPLICATIONS (3)** Overview of the basic principles and applications of digital logic systems. Topics to be covered are the numbering systems of decimal, hexadecimal, octal, BCD, and binary; Boolean algebra and its application in digital logic circuits; the basic logic and truth tables for AND, OR, NAND, NOR, EXCLUSIVE OR, EXCLUSIVE NOR, and INVERTER logic gates; the construction and application of FLIP-FLOPS, TIMERS, COUNTERS, and REGISTERS as individual circuits as well as in combinational circuits. Students will build, test and troubleshoot a project incorporating all of the logic circuits and information covered in the course.

**IEM112 CONTROL CIRCUIT TROUBLESHOOTING (3)** Prerequisite: IEM104. Introduction to the devices and components of industrial automation, sensors, switches, fluid power components, combination of technologies in the systems of manufacturing and industrial processes. Primary emphasis on interpreting line diagrams and troubleshooting control circuits.

**IEM114 MOTOR CONTROLS (3)** Prerequisite: IEM112. Course is designed to teach students how to construct, troubleshoot and isolate malfunctions in various types of control circuits and motor starters; application and installation

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of control devices; and basic principles, operation, components, and application of AC drives.

**IEM116 SOLID STATE DEVICES (3)** Prerequisite: IEM104. Comprehensive overview of solid state devices, their basic principles and applications; the composition and operating characteristics of diodes, transistors, SCRs, DIACs, TRIACs, and solid state transducers; and the application of solid state devices in rectification of AC into DC, power supply filters, voltage regulation, industrial relays, sensors, and alarm systems. Students will install, build and troubleshoot circuits with solid state devices.

**IEM118 ANALOG/DIGITAL (3)** Prerequisite: IEM116. Covers the basic principles involving the use of analog integrated operational amplifiers in signal generation applications; integrated A/D, D/A converters and their applications; shift registers and their applications; and control and timing circuits and their applications.

**IEM122 INTRODUCTION TO PLCS (3)** Prerequisite: IEM114. Introduction to hardware and software of Programmable Logic Controllers. Course is designed to instruct students in the operating system of PLCs, configuration of hardware and communications, number systems, logic circuits and basic programming. The ability to perform basic computer operations is necessary.

**IEM124 INTERMEDIATE PLCS (3)** Prerequisite: IEM122. Study of the interface between machine and controller, advanced programming functions and troubleshooting. Emphasis on developing programs and interfacing with industrial type devices.

**IEM126 INDUSTRIAL SAFETY (3)** Comprehensive study of requirements and programs of 29 CFR 1910. Application of safe work practices to industrial maintenance and manufacturing. Topics selected based on student interest and industry emphasis.

**IEM128 MAINTENANCE MANAGEMENT (3)** Study of contemporary maintenance management practices, statistical applications, Total Productive Maintenance, reliability-based procedures, predictive (PDM) and preventive (PM) maintenance, CMM systems, nondestructive testing, and project management.

**IEM130 PRINCIPLES OF REFRIGERATION (3)** Study of the principles of refrigeration, refrigerants, components, types of systems, operation, electrical controls, troubleshooting, servicing and maintenance. Critical thinking and analytical skills are emphasized.

**IEM132 ADVANCED PLCS (3)** Prerequisite: IEM124. Study of the hardware that is programmed with RSLogix 5000, this class is designed for students who already understand RSLogix 500 and are ready for to advance to "Tag" based programming.

**IEM134 PLC NETWORKS (3)** Prerequisite: IEM132. Course will cover the installation, operation, inspection, and maintenance of industrial communication networks using serial RS232, Ethernet and databus. It will examine various interface devices used in communication and integration of

these devices with computers, PLCs and Web-enabled technology.

**IEM136 GENERAL NEC REQUIREMENTS (3)** Prerequisite: IEM104. Students learn to understand and apply the code to general industrial applications, wiring and protection, wiring methods and materials, and general equipment. Based on the general requirements of the National Electrical Code (NEC).

**IEM138 POWER DISTRIBUTION AND SWITCHGEAR (3)** Prerequisite: IEM136. Course will cover the installation, operation, inspection, and maintenance of industrial power systems. Course will look at power distribution; switchgear and switchboard assemblies; motor control centers; voltage, current and instrument transformers; feeder circuits and busways; switches and circuit breakers; protective devices; regulating devices; and neutral and grounding systems. The National Electric Code (NEC) will be referenced as a guide for the proper wiring installation and operation of electrical power systems.

**IEM140 TRANSFORMERS AND MOTORS (3)** Prerequisite: IEM104. Course examines the principles, construction, types and applications of transformers and motors, including DC generators and motors, alternators and AC motors. Transformers and AC motors applications include single-phase and poly-phase, WYE and DELTA.

**IEM142 MOTION CONTROL SYSTEMS (3)** Prerequisite: IEM132. Course will cover the installation, principle of operation, and application of integrated motion and sequential control devices. Study of the hardware and software architecture used in servo drives, motors and actuators to allow integrated motion in machine control. Provides in-depth training in multiple programming, installation and diagnostics tools used in motion control systems.

**IEM144 PROCESS CONTROL (3)** Prerequisite: IEM132. Covers the dynamics of automatic controls used in industrial processes utilizing conventional feedback control by proportional, integral and derivative (PID Loops) modes of feedback. Examines the installation, operating principles, applications, and maintenance of the single-loop control devices and programming of the software used in PID Loops.

**IEM146 QUALITY MANAGEMENT AND CONTROL (3)** Study of quality management principles and quality control procedures. Students will study quality management from a historical perspective as well as current quality management techniques. Production quality control methods such as sampling, inspecting and testing used to insure accuracy and high standards in production quality will be studied.

**IEM148 INVENTORY AND PRODUCTION CONTROL (3)** Study of production planning, scheduling, follow-up, and control of raw material, parts and finished goods inventories.

**IEM150 APPLICATIONS IN IEM PROBLEM SOLVING (1-4)** Designed to allow a company to utilize an instructor to facilitate an actual problem or improvement project with a group of students or company employees and for individualized special instruction by the instructor.

**IEM175 IEM INTERNSHIP (4-8)** Prerequisite: Student must have completed 30 technical credit hours. Application of work skills in a supervised work environment. Companies that sponsor internships provide the supervision. The college provides general guidance and works with the sponsoring company in developing an outline of the work experiences unique to the site. Course is designed to provide the student an opportunity to demonstrate work skills, work ethics and the ability to work with others. In addition to completing the training plan, the student must submit four to eight written technical reports.

**IEM200 TECHNOLOGY INTEGRATION (3)** Prerequisite: IEM124. Course will evaluate student's skill and ability to design, develop and troubleshoot a simulated manufacturing production system. Students will build a working production system in a simulated workplace environment stressing teamwork and troubleshooting skills. The goal is to prepare a student for entry into the work force as an IEET technician.

## LITERATURE

**LIT101 INTRODUCTION TO LITERATURE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Study of fiction, poetry and drama. Special attention is given to literary terminology and critical analysis. Recommended but not required as a preparation for other courses in literature.

**LIT104 MASTERPIECES BEFORE 1650 (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Students will examine selected works of continental European literature in translation from ancient, medieval and Renaissance movements.

**LIT105 MASTERPIECES AFTER 1650 (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Students will examine selected works of Asian, African and European literature in translation from the age of Europe's Enlightenment through the 20th century.

**LIT107 AMERICAN LITERATURE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Thematic study of major American authors and works from the Colonial Period to the present, emphasizing development of concepts that have shaped American life and literature.

**LIT109 ENGLISH LITERATURE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Study of major English authors and works from Beowulf to the present.

**LIT114 TOPICS IN LITERATURE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Includes the study of a major writer, a literary type, or a theme in literature. Specific subjects are announced each semester in which the course is offered.

**LIT180 PROBLEMS IN LITERATURE (1-3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Independent study of a special problem in literature under the supervision of an instructor in the department.

## MACHINE TOOL

**MACH101 INTRODUCTION TO MACHINING (4)** Introduction to measuring tools used for work in machining or inspection. Introduces the proper setup and use of drilling machines, band saws and lathes. Applications include outside diameter turning, threading and tapering. Areas of study include safety, blueprint interpretation, hand tools, layout, and various gauges to complete and inspect a job.

**MACH102 LATHE AND MILLING MACHINE OPERATIONS (4)** Prerequisite: MACH101. Continuation in the application of lathe operations including: inside diameter turning, threading and tapering. Introduces the proper use and setup of milling machines. Applications include squaring the machine and indicating angle pieces. Areas of study include: safety, blueprint interpretation, and the selection of cutters, feeds, and speeds.

**MACH103 MILLING AND GRINDING MACHINE APPLICATIONS (4)** Prerequisite: MACH102 or consent of instructor. Continuation of milling machine operations including: dividing heads, precise movement of machines, turntable operations, and keyways. Introduces surface grinders in squaring procedures. Areas of study include safety, blueprint interpretation and proper setup and use of milling attachments.

**MACH104 ADVANCED MACHINING (4)** Prerequisite: MACH103 or consent of instructor. Introduces the use of the sine bar and sine plates on milling machines and surface grinders. Will present advanced applications of lathes, mills, grinders, and drill presses. Advanced projects will be timed. Areas of study include estimation of project time and bidding process.

**MACH106 CNC MACHINING (3)** Provides fundamental technical information and some practical experience necessary for programming, editing and operating numerically controlled machine tools.

**MACH109 ADVANCED CNC MACHINING (3)** Prerequisite: MACH106. Provides technical information and considerable practical experience in preparation, setup and operation of wire EDM and CNC lathe. Digitizing on vertical machining center will be introduced. Tryout of programs, editing and improving programs will be emphasized.

**MACH112 MACHINE TOOL EQUIPMENT REPAIR (4)** Prerequisite: MACH106 or consent of instructor. Designed to teach correct procedures for repair and maintenance of machine tools. Study includes safety, repair and replacement of worn parts; and diagnosis and repair of hydraulics, pneumatics and electrical components.

**MACH114 STATISTICAL PROCESS CONTROL (3)** Designed around the process of plotting production results to determine if both product and process meet company standards. Encourages prevention, as opposed to detection of defects, in helping to eliminate costly repairs and scrap.

**MACH115 HEAT TREATING AND METALLURGY (3)** Knowledge of heat treatable steel and alloys will be presented in this course. Study of the operation of heat treating and drawing furnaces, quenching mediums, color spectrum, and hardness testing is included. Students will become familiar with the process involved in making iron and steel, non-

carbon diagrams and identification of ferrous and nonferrous metals.

**MACH175 MACHINE TOOL INTERNSHIP (1-8)** Prerequisite: Consent of instructor. Provides opportunity to work with a skilled machinist, to better understand skills and knowledge needed and to determine how the student likes actual machine tool work.

**MACH180 PROBLEMS IN MACHINE TOOL (1-3)** Independent study of a special problem in machine tool technology under the supervision of a machine tool instructor.

## MARINE TECHNOLOGY

**MRN101 MARINE SYSTEMS RIGGING I (6)** Course provides a foundation of information and skills for a marine career.

**MRN105 MARINE IGNITION SYSTEMS (3)** Outboard, inboard, inboard/outboard, and personal watercraft ignition systems are explored in this course.

**MRN107 MARINE STARTER AND CHARGING SYSTEMS (2)** This course follows the progression of starter and charging systems in the outboard, inboard/outboard and the personal watercraft.

**MRN109 MARINE COOLING SYSTEMS (2)** Course covers the systems used in the cooling process.

**MRN111 MARINE LUBRICATION SYSTEMS (2)** Course begins with the manual mixing of oil and fuel to provide lubrication, and progresses into the different automatic oiling systems.

**MRN113 MARINE ENGINE COMPONENT AND PRECISION MEASURING (3)** Course provides the technician with the skills to determine if an engine component is reusable.

**MRN115 MARINE SHOP PROCEDURES AND BUSINESS OPERATIONS (2)** Properly completing a repair order, providing proper communication with the customer, keeping track of the unit(s) brought in for service, recording the diagnosis and repair process, and the date promised for repair completion.

**MRN117 MARINE ENGINE SYSTEMS ANALYSIS (2)** Course covers proper break-in procedure.

**MRN119 MARINE SYSTEMS PREVENTIVE MAINTENANCE (4)** Course covers maintenance items the technician must be responsible to complete.

**MRN121 MARINE POWER TRANSFER SYSTEMS (4)** Transom plate and adapter systems, couplers, upper gear case, drive shaft housing, jet pumps, gear housings, strut bearings, and surface-piercing drive systems are systems that are part of the course.

**MRN123 MARINE SYSTEMS TROUBLESHOOTING (3)** Course covers correct troubleshooting techniques.

**MRN125 MARINE FUEL SYSTEMS (4)** The course will cover the complexities of marine fuel systems and automatic oiling systems.

**MRN127 MARINE INSTRUMENTATION SYSTEMS (2)** Course promotes understanding the different manufacturer systems and sending units.

**MRN129 MARINE POWER TRIM/TILT SYSTEMS (2)** Course will enable students to understand how hydraulic pumps can manage the pressure in a hydraulic system.

**MRN175 INTERNSHIP (4)** The internship consists of approximately 160 clock hours at an approved marine facility.

## MASS COMMUNICATION

**MCOM101 INTRODUCTION TO MASS MEDIA (3)** Presents a basic overview of the scope and role of the mass media in society. Course integrates media aids with creative assignments and field trips to help students become informed media consumers and gain cultural and global perspectives on the communication industry.

**MCOM112 INTRODUCTION TO PUBLIC RELATIONS (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Overview of the principles and practice of public relations in private and public organizations. Includes analysis of how various organizations' communication philosophy and practices impact their productivity and effectiveness in society.

**MCOM114 NEWS REPORTING I (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Includes the examination of news value, rights and responsibilities of the press, news gathering and reporting techniques, leads, interviewing, style, and specialized articles.

**MCOM115 NEWS REPORTING II (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores and MCOM114 or consent of instructor. Application of concepts and methods learned in News Reporting I, exploration of skills in researching and writing in-depth articles and interaction with community leaders and media professionals are included.

**MCOM117 PRACTICAL JOURNALISM (1)** Prerequisite: ENGL101 and/or consent of instructor. Students will complete writing, editing and/or photography assignments. One hour credit each term for maximum of three hours.

**MCOM180 PROBLEMS IN MASS COMMUNICATION (1-3)** Independent study of a special problem in mass communication under the supervision of an instructor in the department.

## MATHEMATICS

**MATH101 BUSINESS MATH (3)** Prerequisite: BSKL061 with a grade of C or better or equivalent placement score. Practical approach to understanding the application of mathematics within the business environment. Emphasis is placed on developing mathematical solutions to problems in the areas of marketing, accounting, finance, and banking.

**MATH107 TECHNICAL MATH I (3)** Prerequisite: BSKL061 with a grade of C or better or equivalent placement score. Topics include: scientific notation, variation, proportion,

applied geometry, basic algebraic manipulations, and angles, sides, and triangle relationships. Course will stress applications to practical problems as they apply to trade.

**MATH108 TECHNICAL MATH II (3)** Prerequisite: MATH107 with a grade of C or better or equivalent placement score. Topics include signed numbers, formulas, algebraic functions, and trigonometry relationships. Course will stress applications to practical problems as they apply to trade.

**MATH112 INTERMEDIATE ALGEBRA (3)** Prerequisite: BSKL064 with a grade of C or better or equivalent placement score. Topics include: properties of the real number system, scientific notation, equations and inequalities involving absolute value, graphs of linear equations and inequalities in the plane, systems of equations in two unknowns, rational exponents and radicals, radical equations, imaginary and complex numbers, quadratic equations and inequalities, and conic sections.

**MATH114 COLLEGE ALGEBRA (3)** Prerequisite: MATH112 with a grade of C or better or equivalent placement score. Topics include: properties of functions and their graphs, variation, solving polynomial equations, the fundamental theorem of algebra, properties of logarithms, logarithmic and exponential equations, exponential growth and decay, linear systems in more than two variables, matrices and determinants. This course will satisfy the A.A. or A.A.T. math requirement.

**MATH116 FINITE MATH (3)** Prerequisite: MATH112 with a grade of C or better or equivalent placement score. College-level mathematics course suitable for students whose major does not require College Algebra for a more advanced mathematics course such as calculus. Topics include: applications of linear functions, matrix algebra, linear programming with the simplex algorithm, theory of finite sets with applications of Venn diagrams, combinatorial analysis, and probability theory. This course will satisfy the A.A. or A.A.T. math requirement.

**MATH117 CONTEMPORARY MATHEMATICS (3)** Prerequisite: MATH112 with a grade of C or better or equivalent placement score. Mathematical concepts with historical perspectives from various branches of mathematics including an introduction to set theory, logic, number theory, statistics, combinatorics, and geometry. This course will satisfy the A.A. or A.A.T. math requirement.

**MATH120 TRIGONOMETRY (3)** Prerequisite: MATH114 or taking concurrently. Designed for students whose major requires trigonometry or for students planning to take calculus. Topics include: radius vector, right triangle and unit circle definitions of trigonometric functions; trig identities, graphs, inverse trigonometric functions, trigonometric equations, DeMoivre's Theorem, and conics. This course will satisfy the A.A. math requirement.

**MATH122 PRECALCULUS MATH (5)** Prerequisite: MATH112 or MATH114 with a grade of C or better or equivalent placement score. Topics include: algebraic, exponential, logarithmic, and trigonometric function; trigonometric identities, trigonometric equations and other selected topics of algebra. This course will satisfy the A.A. math requirement.

**MATH125 CALCULUS FOR BUSINESS (3)** Prerequisite: MATH114 with a grade of C or better or equivalent placement score. A brief treatment of elementary calculus with

applications to business and economics. Topics include: limits and continuity, derivatives and integrals of algebraic, exponential and logarithmic functions, compound interest, cost revenue and profit functions, and elasticity of demand. This course will satisfy the A.A. math requirement.

**MATH127 BUSINESS STATISTICS (3)** Prerequisite: MATH114 or MATH116 with a grade of C or better or equivalent placement scores. Emphasizes data analysis, data production and statistical inference. Topics include: descriptive statistics, normal distributions, correlation and regression, design of samples and experiments, the central limit theorem, control charts, confidence intervals, and significance tests. This course will satisfy the A.A. math requirement.

**MATH130 CALCULUS AND ANALYTIC GEOMETRY I (5)** Prerequisite: MATH122 with a grade of C or better or MATH114 and MATH120 with a grade of C or better or equivalent placement score. Topics include: limits, continuity, derivatives and integrals of algebraic and transcendental functions, and appropriate applications. This course will satisfy the A.A. or A.A.T. math requirement.

**MATH131 CALCULUS AND ANALYTIC GEOMETRY II (5)** Prerequisite: MATH130 with a grade of C or better. Topics include: parametric and polar coordinates, methods of integration, series, and conic sections, and application of these topics.

**MATH132 CALCULUS AND ANALYTIC GEOMETRY III (5)** Prerequisite: MATH131 with a grade of C or better. Topics include: parametric equations of lines and curves in space, vectors, calculus of vector functions, multivariable, differential and integral calculus; introduction to vector analysis and differential equations and application of these topics.

**MATH134 DIFFERENTIAL EQUATIONS (3)** Prerequisite: MATH132 with a grade of C or better. Course presents linear differential equations with application, series solutions and LaPlace transforms.

**MATH180 PROBLEMS IN MATH (1-3)** Independent study of a special problem in mathematics under the supervision of a mathematics instructor.

## MEDICAL OFFICE

**MEOF101 MEDICAL TERMINOLOGY I (3)** Acquaints student with the technical language used in various medical areas and is part of the degree requirement for secretarial students with a medical emphasis. Students will concentrate on the pronunciation, spelling and definitions of selected medical terms, plus how medical terms are made up of prefixes, suffixes and root words.

**MEOF102 MEDICAL TERMINOLOGY II (3)** Prerequisite: MEOF101. Continuation of Medical Terminology I. Enables students of health-related fields to more fully understand and communicate the language of medicine. Topics include: the review of patient case histories, abbreviation of medical terms, laboratory and pharmaceutical term review, and a concentrated in-depth study of definitions, pronunciations and spellings of terms used in specialty areas of health-related institutions.

**MEOF103 JOB SHADOWING IN THE MEDICAL OFFICE (1)** Introduces medical office majors to the functions, routines and

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atmospheres of five different kinds of medical offices through observation.

**MEOF105 MEDICAL OFFICE PROCEDURES (3)** Prerequisites: CAPP118 and preferably MEOF101 and BSKL014 or equivalent placement score. Introduction of administrative office procedures in the medical office setting. Coursework includes projects typically performed by medical office personnel.

**MEOF107 MEDICAL TRANSCRIPTION (3)** Prerequisites: MEOF101, CAPP118, OADM118, CAPP125 and BSKL014 with a grade of C or better or equivalent placement score. Individualized course provides extensive transcription of medical dictation with emphasis on proofreading and producing error-free documents. Students will further develop their medical vocabulary as they transcribe medical reports.

**MEOF108 BODY STRUCTURE AND FUNCTION FOR MEDICAL OFFICE ADMINISTRATION (3)** Prerequisite: MEOF101 preferred. Emphasizes the complementary nature of human body structure and functions; homeostatic regulating mechanisms; and the interaction between humans and their environments including metabolic processes, responses to stress, pathological disorders, and phases in the human life cycle.

**MEOF110 CLINICAL ASSISTING TECHNIQUES (3)** Prepares the medical secretary with basic medical office assisting skills needed in most physicians' offices. Legal implications and personal and patient safety are also emphasized. (Requirements beyond this course are also required for A.A.M.A. certification.)

**MEOF111 CLINICAL PRACTICUM (1)** Prerequisites: MEOF110 and consent of instructor. On-the-job experience provides an opportunity to work in a medical office. Students are responsible to an instructor who evaluates their performance.

**MEOF112 ADVANCED MEDICAL TRANSCRIPTION (3)** Prerequisites: MEOF107, CAPP118, CAPP125 and BSKL014 with a grade of C or better or equivalent placement score. Individualized course includes extensive transcription of advanced medical dictation with a focus on increasing speed and accuracy. The course is designed to refine transcription skills to a competitive level by providing realistic and challenging dictated reports.

**MEOF118 PROCEDURE AND DIAGNOSIS CODING (3)** Prerequisites: MEOF101 and BSKL014 with a grade of C or better or equivalent placement score. Course for medical office employees and medical office administration majors with emphasis placed on accurate coding for maximum reimbursement. Extensive discussion and coursework with ICD-9-CM diagnosis and procedure coding including reading and interpreting medical reports for accurate coding.

**MEOF119 ADVANCED PROCEDURE AND DIAGNOSIS CODING (3)** Prerequisites: MEOF118, BIO103, BIO207, BIO 208 and consent of instructor. Course for medical office employees and medical office administration students who wish to specialize in procedure and diagnosis coding. Students will receive advanced instruction in CPT-4 procedural coding as well as ICD-9-CM diagnosis coding. Coursework will include practical experience in reading, interpreting, and coding medical records and reports.

**MEOF121 DOCUMENTATION AND COMPLIANCE (1)** Prerequisites: MEOF101 and MEOF118 or concurrent

enrollment. Teaches students proper documentation procedures for compliance with federal regulations for coding and billing.

**MEOF125 MEDICAL SKILLBUILDING (1)** Prerequisites: MEOF101 and CAPP118. Individualized course to improve keyboarding accuracy and to increase keyboarding speeds required for medical transcription. To meet requirements for graduation, medical office administration degree candidates (except medical transcription majors) must achieve a grade of B and certificate candidates must achieve a grade of C.

**MEOF126 MEDICAL SKILLBUILDING FOR TRANSCRIPTION (1)** Prerequisites: MEOF101 and CAPP118. Individualized course to improve keyboarding accuracy and to increase keyboarding speeds required for medical transcription majors. To meet requirements for graduation, medical transcription degree candidates must achieve a minimum grade of B.

**MEOF130 ESSENTIALS OF PHARMACOLOGY (2)** Content provides basic concepts of pharmacology. Students will gain an understanding of drug categories, their actions and commonly used drugs in each category. For medical office majors only.

**MEOF182 MEDICAL OFFICE MANAGEMENT SUPPORT SERVICES INTERNSHIP (3)** Prerequisite: Program coordinator approval required. Provides an opportunity to gain experience by working in a medical setting. Students are responsible to a job supervisor and an instructor who evaluate their performance.

**MEOF183 MEDICAL OFFICE MEDICAL TRANSCRIPTION INTERNSHIP (3)** Prerequisite: Program coordinator approval required. Provides an opportunity to gain experience by working in a medical transcription setting. Students are responsible to a job supervisor and an instructor who evaluate their performance.

**MEOF184 MEDICAL OFFICE PROCEDURE AND DIAGNOSIS CODING INTERNSHIP (3)** Prerequisite: Program coordinator approval required. Provides an opportunity to gain experience by working in a medical coding setting. Students are responsible to a job supervisor and an instructor who evaluate their performance.

## MILITARY SCIENCE

**MSL110 INTRODUCTION TO LEADERSHIP I (2)** Course concentrates on Army issues and competencies that are central to a commissioned officer's responsibilities. These initial lessons establish a framework for understanding officership, leadership and Army values. The semester addresses "life skills" including fitness and team development. Course is designed to give accurate insight into the Army profession and the officer's role within the Army.

**MSL120 INTRODUCTION TO LEADERSHIP II (2)** Course concentrates on further developing the student's knowledge of officership, leadership and Army values. The semester focuses on the application of leadership skills through effective communication. Course gives the student initial exposure to the fundamental battle drills used for tactical operations and the Army orders process.

**MSL210 INNOVATIVE TEAM LEADERSHIP (2)** Explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two

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historical leadership theories that form the basis of the Army leadership framework. Aspects of personal motivation and team building are practiced by planning, executing and assessing team exercises and participating in leadership labs. The focus continues to build upon developing knowledge of the leadership values and attributes through understanding Army rank, structure and duties as well as broadening knowledge of land navigation and squad tactics. Case studies provide context for learning the Soldier's Creed and Warrior Ethos as they apply in the contemporary operating environment.

**MSL220 FOUNDATIONS OF TACTICAL LEADERSHIP (2)** Examines the challenges of leading tactical teams in the complex contemporary operating environment. Course highlights dimension of terrain analysis, patrolling and operation orders. Continued study of the theoretical basis of the Army leadership framework explores the dynamics of adaptive leadership in the context of military operations. Cadets develop greater self-awareness as they assess their leadership styles and practice communication and team building skills. Case studies give insight into the importance and practice of teamwork and tactics in real world scenarios.

## MUSIC

**MUS100 FUNDAMENTALS OF MUSIC (3)** Prerequisite or concurrency: MUS105. Rudiments of music (note names, scales, key signatures, rhythms, intervals, notation, and triads) with their application within the context of music theory.

**MUS101 MUSIC APPRECIATION (3)** Introductory course concerned with the elements of music, the important musical masterpieces and the significant composers. A portion of the class time is devoted to listening to recordings of selected composers and performers. Not open to music majors.

**MUS103 MUSIC HISTORY AND LITERATURE I (3)** Fine arts course (for music majors only) which surveys music history and literature from its beginnings through the Baroque era. Instrumental and vocal/choral genres and major composers will be studied. A significant portion of class time will be devoted to listening to recordings of appropriate music, composers and performers.

**MUS104 MUSIC HISTORY AND LITERATURE II (3)** Fine arts course (for music majors only) which surveys music history and literature from the Classical era to the present. Instrumental and vocal/choral genres and major composers will be studied. A significant portion of class time will be devoted to listening to recordings of appropriate music, composers and performers. It is a continuation of Music History and Literature I.

**MUS105 FUNDAMENTALS OF AURAL TRAINING (1)** Prerequisite or concurrency: MUS100. This course will cover sight-singing, solfege, keyboard skills, and melodic and harmonic dictation.

**MUS106 MUSIC THEORY I (3)** Prerequisite: MUS100 or by examination. Concurrency: MUS109. Basic materials including notation, rhythm and meter, scales, intervals, triads, and melodic analysis.

**MUS107 MUSIC THEORY II (3)** Prerequisite: MUS106. Concurrency: MUS110. This course covers primary and secondary triads and seventh chords, introduction of altered chords, modulation, and cadential figures.

**MUS108 MUSIC THEORY III (3)** Prerequisite: MUS107. Concurrency: MUS111. A continuation of the materials and the organization of music including modality, counterpoint, and late 19th century harmonic functions.

**MUS109 AURAL TRAINING I (1)** Prerequisite: MUS105. Concurrency: MUS106. Students will continue improvement in sight-singing, solfege, keyboard skills, and melodic and harmonic dictation. Coordinated with Music Theory I.

**MUS110 AURAL TRAINING II (1)** Prerequisite: MUS109. Concurrency: MUS107. Students will continue improvement in sight-singing, solfege, keyboard skills, and melodic and harmonic dictation. Coordinated with Music Theory II.

**MUS111 AURAL TRAINING III (1)** Prerequisite: MUS110. Concurrency: MUS108. Students will continue improvement in sight-singing, solfege, keyboard skills, and melodic and harmonic dictation. Coordinated with Music Theory III.

**MUS112 SMALL ENSEMBLE-INSTRUMENTAL (1)** Prerequisite: Consent of instructor. Perform and study music written specifically for small instrumental music ensembles.

**MUS119 JAZZ BAND I (1)** Prerequisite: Consent of instructor. A select ensemble which performs jazz literature representing traditional, as well as most current forms of jazz.

**MUS120 JAZZ BAND II (1)** Prerequisite: MUS119. Second enrollment in Jazz Band.

**MUS121 JAZZ BAND III (1)** Prerequisite: MUS120. Third enrollment in Jazz Band.

**MUS122 JAZZ BAND IV (1)** Prerequisite: MUS121. Fourth enrollment in Jazz Band.

**MUS136 APPLIED INSTRUMENTAL LESSONS I (1-2)** Performance-oriented study of the technique and literature associated with a specific musical instrument.

**MUS137 APPLIED INSTRUMENTAL LESSONS II (1-2)** Prerequisite: MUS136. Second enrollment in Instrumental Lessons.

**MUS138 APPLIED INSTRUMENTAL LESSONS III (1-2)** Prerequisite: MUS137. Third enrollment in Instrumental Lessons.

**MUS139 APPLIED INSTRUMENTAL LESSONS IV (1-2)** Prerequisite: MUS138. Fourth enrollment in Instrumental Lessons.

**MUS140 GUITAR CLASS I (2)** Practical study of the guitar designed for beginning students with less than one year of experience.

**MUS141 GUITAR CLASS II (2)** Prerequisite: MUS140 or consent of instructor. Designed to allow the student to continue studying guitar beyond Guitar Class I.

**MUS145 BEGINNING PIANO CLASS I (2)** Study of the piano, especially for students without previous training.

**MUS146 BEGINNING PIANO CLASS II (2)** Prerequisite: MUS145. Continuation of skills learned in Beginning Piano Class I.

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**MUS147 INTERMEDIATE PIANO CLASS I (2)** Prerequisite: MUS146 or consent of instructor. Continuation of skills learned in Beginning Piano Class II with emphasis on specific piano proficiency skills.

**MUS148 INTERMEDIATE PIANO CLASS II (2)** Prerequisite: MUS147. Continuation of skills learned in Intermediate Piano Class I with emphasis on specific piano proficiency skills.

**MUS150 APPLIED PIANO LESSONS I (1-2)** Private piano lessons for students having at least one year of piano class or permission of the instructor. Intended only for serious piano students.

**MUS151 APPLIED PIANO LESSONS II (1-2)** Prerequisite: MUS150. Second enrollment in Piano Lessons.

**MUS152 APPLIED PIANO LESSONS III (1-2)** Prerequisite: MUS151. Third enrollment in Piano Lessons.

**MUS153 APPLIED PIANO LESSONS IV (1-2)** Prerequisite: MUS152. Fourth enrollment in Piano Lessons.

**MUS155 VOICE CLASS I (2)** Study of vocal techniques and beginning vocal performance. Open to any interested students.

**MUS156 VOICE CLASS II (2)** Prerequisite: MUS155. Second enrollment in Voice Class.

**MUS160 APPLIED VOICE LESSONS I (1)** Private voice lessons for students having at least one year of voice class or permission of the instructor. Intended only for serious vocal students.

**MUS161 APPLIED VOICE LESSONS II (1)** Prerequisite: MUS160. Second enrollment in Voice Lessons.

**MUS162 APPLIED VOICE LESSONS III (1)** Prerequisite: MUS161. Third enrollment in Voice Lessons.

**MUS163 APPLIED VOICE LESSONS IV (1)** Prerequisite: MUS162. Fourth enrollment in Voice Lessons.

**MUS165 CONCERT CHORALE I (1)** This large ensemble performs the finest of chorale literature and representative works in various styles of chorale composition. Open to all who enjoy singing.

**MUS166 CONCERT CHORALE II (1)** Prerequisite: MUS165. Second enrollment in Concert Chorale.

**MUS167 CONCERT CHORALE III (1)** Prerequisite: MUS166. Third enrollment in Concert Chorale.

**MUS168 CONCERT CHORALE IV (1)** Prerequisite: MUS167. Fourth enrollment in Concert Chorale.

**MUS170 SMALL ENSEMBLE I (1)** Prerequisite: Consent of instructor. Perform and study music written specifically for smaller vocal ensembles.

**MUS171 SMALL ENSEMBLE II (1)** Prerequisite: MUS170. Second enrollment in Small Ensemble.

**MUS172 SMALL ENSEMBLE III (1)** Prerequisite: MUS171. Third enrollment in Small Ensemble.

**MUS173 SMALL ENSEMBLE IV (1)** Prerequisite: MUS172. Fourth enrollment in Small Ensemble.

**MUS175 CHAMBER SINGERS I (1)** Prerequisite: Consent of instructor. A select small chamber choir of mixed voices that performs chamber music from all historical periods.

**MUS176 CHAMBER SINGERS II (1)** Prerequisite: MUS175. Second enrollment in Chamber Singers.

**MUS177 CHAMBER SINGERS III (1)** Prerequisite: MUS176. Third enrollment in Chamber Singers.

**MUS178 CHAMBER SINGERS IV (1)** Prerequisite: MUS177. Fourth enrollment in Chamber Singers.

**MUS180 PROBLEMS IN MUSIC (1-3)** Independent study of a special problem in music under the supervision of a music instructor.

**MUS185 SHOW CHOIR I (2)** Prerequisite: Audition by appointment. Students selected for the SFCC Show Choir perform in college and community concerts as well as tours, clinics and performance venues.

**MUS186 SHOW CHOIR II (2)** Prerequisite: MUS185. Second enrollment in Show Choir.

**MUS187 SHOW CHOIR III (2)** Prerequisite: MUS186. Third enrollment in Show Choir.

**MUS188 SHOW CHOIR IV (2)** Prerequisite: MUS187. Fourth enrollment in Show Choir.

**MUS230 MUSIC IN THE ELEMENTARY SCHOOL (2)** Course includes basic music reading and singing skills, teaching techniques (general and music specific), understanding music curriculum content, and materials and methods for teaching music.

## NETWORKING

**NET102 NETWORKING I (3)** Use and implementation of local area networks and network design.

**NET106 NETWORKING II (3)** Presents the concepts of network security using the objectives covered in the certification test. Firewalls, viruses, physical security, server and client security, and preventing unauthorized attacks will be discussed.

**NET120 NETWORK SERVER (3)** Prerequisite: NET102 or consent of instructor. Course will cover the current popular server operating system. Topics include planning of a network, installation of hardware and software, management, client accounts, and troubleshooting. Course will be structured to the requirements for certification.

**NET126 NETWORK CLIENT (3)** Prerequisite: NET102 or consent of instructor. Study of the operating system used on today's workstations. Installation, administration, configuring files, security, local and network printing will be presented

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from a network administrator's viewpoint. Troubleshooting and networking the operating system will be included.

**NET127 FUNDAMENTALS OF UNIX (3)** Utilization of the UNIX operating system commands and, in the hands-on exercise, basic Sun Microsystems' Solaris TM operating environment commands. Students will be introduced to the Common Desktop Environment (CDE—graphical interface between different environments). Intended for new users of UNIX. Fundamental command-line features of the Solaris environment including file system navigation, file permissions, the text editor, command shells, and basic network use will be covered.

**NET128 ADVANCED FUNDAMENTALS OF UNIX (3)**

Teaches the advanced management of the UNIX operating system commands and, in the hands-on exercise, advanced Sun Microsystems' Solaris TM operating environment commands. Students learn routing features and use TCP/IP in a UNIX environment. Students will create a WAN topology using UNIX systems.

**NET129 FUNDAMENTALS OF VOICE AND DATA CABLING (3)**

Focuses on cabling issues related to data and voice connections and provides an understanding of the industry and its worldwide standards, types of media and cabling, physical and logical networks, as well as signal transmission. Students will develop skills in reading network design documentation, par list set up and purchase, pulling and mounting cable, cable management, choosing wiring closets and patch panel installation and termination, as well as installing jacks and cable testing.

**NET130 TCP/IP (3)** Covers the theory and application of an entire collection of protocols with applications for performing tasks such as e-mail, file transfers and terminal emulation. Packet structure and interpretation of data fields, network analysis and Internet work connectivity will be covered.

**NET134 WEB SERVER (3)** Covers the installation, management and applications of a Web server. Students will create a Web page to be published on class Web site. No prior Web page knowledge is required. Web security will also be discussed.

**NET135 SQL SERVER SYSTEM ADMINISTRATION (3)**

Prerequisite: NET120 or consent of instructor. How to install, configure and administrate SQL Server. Topics covered include: configuring database options (capacity, connectivity, and performance); automating data transfer and manipulation with Data Transformation Services (DTS) packages; using SQL Server replication services; managing security (authentication, logins, permissions, and alerts); monitoring and fine-tuning system performance; performing backups and restorations; clustering databases; supporting SQL Server in a clustered environment; implementing disaster recovery; and optimizing clustering performance.

**NET136 EXCHANGE SERVER ADMINISTRATION (3)**

Prerequisite: NET120 or consent of instructor. Installing, configuring and administering Microsoft Exchange Server. Configure Microsoft Directory Services, administer groups and public folder solutions for Exchange Server. Deployment of mail clients such as Outlook and Outlook Web Access, as well as configuring recipient objects for e-mail, instant messaging and chat will also be covered. Learn to troubleshoot messaging connectivity and how to resolve problems with clients, routing, foreign mail systems, and links between

servers. Additional topics covered include: enhanced Exchange Server Security using v.3 certificates, virtual servers, and Key Management Server; optimizing messaging, collaboration and calendaring services; managing the Microsoft Web Storage System; and developing a backup and recovery plan for system and user data.

**NET137 INTERNET SECURITY AND ACCELERATION SERVER (3)**

Prerequisite: NET120 or consent of instructor. Student will learn to install the ISA Server and set up hosting roles, VPNs, dial-up connections, and an H.323 Gatekeeper. Additional topics will include: creating and administering access control and bandwidth policies; configuring clients for secure network address translations, firewall software and other services; managing arrays of multiple ISA Servers; applying forward and reverse caching for faster Web connectivity; monitoring server performance with alerts, logs, reports, and performance counters; and troubleshooting problems with access, network usage and security.

**NET138 NETWORK DIRECTORY SERVICES (3)**

Prerequisite: NET120 or consent of instructor. The planning, configuring and administration of Network Directory Services and infrastructure on a LAN. Topics include the installation and configuration of Domain Name System (DNS); the administration of the network users' environment and software using group policies; Remote Installation Services (RIS); management of users, groups, shared folders, and network resources; implementing network security and security troubleshooting; and monitoring and optimizing the Directory Services.

**NET140 PC HARDWARE (3)** Presents Microcomputer architecture, I/O, and systems operation. Other topics include peripherals, diagnostics, drives, memory, and maintenance procedures. Laboratory consists of troubleshooting selected computer systems.

**NET142 PC OPERATING SYSTEMS (3)** Study of computer operating systems to include Windows, Linus and DOS, with requirements of necessary hardware and known problems and features. Laboratory consists of installation, maintenance and repair of operating systems.

**NET150 CISCO NETWORKING (3)** Online, instructor assisted beginning class in networking. Different LAN topologies, network devices, OSI layers, LAN installation, and considerations for implementation will be covered. Student will design, install and implement a network in the lab.

**NET151 CISCO ROUTER BASICS (3)** Prerequisite: NET150. Introduction to the basic implementation and operation of network routers used in computer networks. Instructor lead and online instruction will be used in the material delivery. Lab will consist of installing, configuring and operating routers in a working network.

**NET152 CISCO SWITCHING BASICS (3)** Prerequisite: NET151. Presents protocols used with CISCO routers and other devices on a small or large network. Material will be presented as online instruction with instructor assistance. Student will set up, configure and operate a router in the LAN environment.

**NET153 CISCO WAN (3)** Prerequisite: NET152. Covers the networking environment as applied to a Wide Area Network (WAN), with Point-to-Point Protocol, ISDN, and Frame Relay

will be used in a WAN with case studies of different applications. Student will implement a WAN and manage a network.

**NET158 NETWORK FIREWALLS (3)** Prerequisites: NET106, NET151 and NET152. Course will cover the functions, features and configuration of a firewall as applied in a network. Covers setup, management, traffic filtering, and VPNs. Students will configure and implement firewalls to protect the network from external threats. Hands-on course work is included in the course.

**NET175 NETWORK ADMINISTRATION INTERNSHIP (4)** Designed for practical application in the operations of a network. Provides on-the-job training work experience in the area of computer networks. Student will be supervised and evaluated by the instructor.

**NET180 NETWORKING PROJECT (1-3)** Independent study of a special problem in Networking under the supervision of a CIS instructor.

## NURSING

Students must be admitted to the bi-level nursing program to register for NURS110-NURS242.

**NURS102 CPR FOR HEALTH CARE PROVIDERS (1/2)** American Heart Association course teaches health care providers how to recognize and respond to life-threatening emergencies such as respiratory arrest, cardiac arrest and foreign-body airway obstruction in infants, children and adults. The skills necessary to respond to these emergencies are demonstrated and practiced during the class.

**NURS103 CPR RECERTIFICATION (1/4)** Prerequisite: NURS102. Course is required to maintain American Heart Association CPR certification in the health care field. Upon successful completion, the health care provider will be issued a current CPR card from the American Heart Association.

**NURS110 PERSONAL VOCATIONAL CONCEPTS (1)** A required course for the PN certificate eligible first year nursing student. Course is mandated by Missouri State Board of Nursing, and the requirements are outlined in the Missouri State Board of Nursing Statutes for the PN student. Course introduces behavioral concepts important to the nurse. History, role identification, responsibility, and legal aspects of the licensed practical nurse (and registered nurse) are included.

**NURS112 INTRODUCTION TO PSYCHO-SOCIAL HEALTH (2)** Introductory course assists the new nursing learner to basic concepts of wellness and illness, caring, communication techniques, and growth and development across the life cycle. Special circumstances, such as the impact of violence and abuse as well as the grieving process on the individual and family, will be explored during this class. Special treatment modalities such as medications will be discussed with regard to concepts of mental health.

**NURS114 FUNDAMENTALS I (2)** Course presents basic nursing skills that every nurse must master to provide competent nursing care. The course integrates knowledge from physical and behavioral sciences with clinical nursing skills.

**NURS116 FUNDAMENTALS II (2 1/2)** Course presents more advanced nursing skills that every nurse must master to provide competent nursing care. The nursing process is stressed as the framework for administering nursing care. Physical assessments, basic concepts of elimination, activity, rest, IV therapy, medication administration, and technical skills are learned and practiced in this course. Classroom discussion, clinical simulation and lab practice are part of this course.

**NURS118 FUNDAMENTALS II CLINICAL (1 1/2)** Clinical course relates the concepts learned in Fundamentals I and Fundamentals II to the clinical setting. The learner will apply the basic nursing skills learned such as providing nursing care, performing a physical assessment, practicing communication techniques, and performing technical skills in the clinical setting. Documenting care provided will also be expected.

**NURS120 ALLIED HEALTH PHARMACOLOGY (2)** Course introduces the allied health learner to the basic principles of pharmacology. Basic pharmacodynamic and pharmacokinetic principles of the most common drug classifications and selected drugs will be explored.

**NURS122 ADULT HEALTH I (4)** Basic nursing course addresses principles and nursing care for clients experiencing alterations in the respiratory system, cardiac system and the immune system, as well as clients with surgery and cancer.

**NURS124 ADULT HEALTH II (4)** Basic nursing course addresses principles and nursing care for clients experiencing alterations in neurological, gastrointestinal systems, as well as the client who has developed diabetes mellitus. Basic strategies for leadership and conflict resolution.

**NURS126 ADULT HEALTH NURSING CLINICAL (3)** Clinical course applies the basic nursing concepts to the clinical site setting. The learner will provide nursing care to the client and family with altered health status, relating laboratory findings, medications, and client response. IV therapy will be utilized in this clinical course.

**NURS128 ADULT HEALTH III (2)** Basic nursing course addresses principles and nursing care for clients experiencing alterations in endocrine, sensory, musculoskeletal, skin and hematological systems.

**NURS130 ADULT HEALTH CARE COORDINATION CLINICAL (2)** Clinical course capstones the first year's basic skills that include leadership, conflict resolution, coordinating client care, and applying basic nursing principles across the lifespan.

**NURS132 NUTRITION (3)** Essential nutrient digestion, absorption, metabolism, and excretion are emphasized. Diet analysis and current issues in nutrition will aid the learner in applying the basic concepts to everyday situations throughout the life cycle.

**NURS134 NURSING CARE FOR THE CHILDBEARING FAMILY (2)** Course will focus on uncomplicated health care and wellness promotion for the family during the reproductive years including the newborn, the postpartum mother, the laboring client, and gynecological issues.

**NURS136 CHILDBEARING FAMILY CLINICAL (1 1/2)** The learner will participate in community and hospital activities to develop skills in family-centered care of the new family and the client with gynecological alterations. The learner will have

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learning opportunities to provide/observe labor and delivery, postpartum, newborn, and post operative gynecological care.

**NURS140 NURSING CARE FOR THE CHILD REARING FAMILY (2)** Course focuses on children and their families. Family-centered nursing care for the child experiencing transition through developmental stages and alterations in body systems or health promotion activities will be topics for discussion. There will be a variety of classroom activities.

**NURS142 CHILD REARING FAMILY CLINICAL (1 1/2)** The learner will participate in community and hospital activities to develop skills in family-centered care of children. Experiences will include health promotion activities in the community and nursing care of ill children in the hospital setting.

**NURS210 NURSING TRANSITION COURSE (2)** Prerequisite: Acceptance to Year Two of the Associate Degree Nursing program. Course will orient the advanced placement student to State Fair Community College's philosophy and outcome-based curriculum and acknowledge current competencies. This course will also prepare the advanced placement student for transition to the ADN program. Opportunities will be provided to review and strengthen competencies in pharmacology (including dosage calculations), IV starts and maintenance, physical assessment, and more. Completion of the course with a C or better is required to continue in the ADN program.

**NURS212 INTRODUCTION TO PROFESSIONAL NURSING (1 1/2)** Course enhances the learner's current leadership and management abilities. The course includes discussions of leadership styles as well as the differences and similarities between leadership and management in the role of the registered nurse in various health care settings with diverse populations and cultures.

**NURS214 COMPLEX HEALTH: MENTAL HEALTH (3)** Course focuses on the nurse's role in promoting psychosocial integrity for the client and family/significant others. The course will cover areas related to coping mechanisms, crisis intervention, therapeutic communication, and psychopathology. The learner will be able to describe the nurse's role in supporting the client and family/significant others through stressful events or with the management of acute or chronic mental illness. A variety of classroom activities will be utilized.

**NURS216 COMPLEX HEALTH: MENTAL HEALTH CLINICAL (2)** Course focuses on the nurse's role in an inpatient mental health setting. The learner will participate in and lead therapeutic groups. Planning and managing the care of a client in an inpatient mental health facility.

**NURS218 COMPLEX HEALTH: ELIMINATION (2)** Course explores the complex features of selected diseases and disorders affecting the process of elimination. The topics will be discussed within the framework of Gordon's Functional Health patterns and utilize the nursing process to explore the registered nurse's role in the more complex issue of care and management of the diseases and disorders affecting the associated domains. These discussions will also incorporate selected advanced concepts of pathophysiology including diagnostic procedures and nursing responsibilities, diet and pharmacological therapies, gerontological considerations, and also client and family teaching.

**NURS220 COMPLEX HEALTH: NUTRITION/METABOLIC (1 1/2)** Course explores the complex features of selected

diseases and disorders affecting the process of nutrition and metabolism. The topics will be discussed within the framework of Gordon's Functional Health patterns and utilize the nursing process to explore the registered nurse's role in the more complex issues of care and management of the diseases and disorders affecting the associated domains. These discussions will also incorporate selected advanced concepts of pathophysiology including diagnostic procedures and nursing responsibilities, diet and pharmacological therapies, gerontological considerations, and also client and family teaching.

**NURS226 COMPLEX HEALTH: FAMILY (2)** Course advances the learner's ability to provide complex care for those newborn, pediatric and obstetric clients with complicated issues or at high risk for developing complications.

**NURS228 COMPLEX HEALTH: FAMILY CLINICAL (1)** Clinical relates the learner's advanced knowledge with the ability to apply it in the clinical setting. The learner will provide care for the family in situations of high risk or with complicated health issues to the newborn, pediatric or obstetric client. This clinical will build upon the classroom discussions in NURS226. Clinical settings will include inpatient obstetrics and pediatrics.

**NURS230 COMPLEX HEALTH: ADULT CLINICAL I (1)** Clinical assists the learner to utilize and apply the leadership and management principles explored in NURS212. The learner will also manage clients with complex health problems.

**NURS232 COMPLEX HEALTH: ADULT CLINICAL II (3)** Inpatient clinical course focuses on managing clients with complex health care needs. The learner will manage care for clients in ICU, ER and step-down units. There will be an emphasis on problem-solving, advanced physical assessment techniques and time management activities. Application of these principles will be demonstrated in the appropriate clinical settings.

**NURS234 COMPLEX HEALTH: ACTIVITY AND REST (3)** Course explores the complex features of selected diseases and disorders affecting activity and rest, which include, but are not limited to: oxygenation, respiration and alterations in hemodynamic functioning. The topics will be discussed within the framework of Gordon's Functional Health patterns and utilize the nursing process to explore the registered nurse's role in the more complex issues of care and management of the diseases and disorders affecting the associated domains. These discussions will also incorporate selected advanced concepts of pathophysiology including diagnostic procedures and nursing responsibilities, diet and pharmacological therapies, gerontological considerations, and also client and family teaching.

**NURS236 COMPLEX HEALTH: COGNITIVE/PERCEPTUAL (2)** Course explores the complex features of selected diseases and disorders affecting cognitive and perceptual functioning. The topics will be discussed within the framework of Gordon's Functional Health patterns and utilize the nursing process to explore the registered nurse's role in the more complex issues of care and management of the diseases and disorders affecting the associated domains. These discussions will also incorporate selected advanced concepts of pathophysiology which includes specific diagnostic procedures and nursing responsibilities, diet and pharmacological therapies, gerontological considerations, and also client and family teaching.

**NURS238 COMPLEX HEALTH: COMMUNITY MANAGEMENT (2)** Course addresses community health and wellness resources and strategies that will assist the client in achieving a greater level of wellness. Current trends in providing care in the community setting as well as the impact of technology in achieving results will be explored. Health prevention screenings and client and community education are utilized to promote community wellness.

**NURS240 COMPLEX HEALTH: COMMUNITY MANAGEMENT CLINICAL (1)** Course applies the knowledge gained from NURS238 in the clinical setting. This clinical has sites in the community and addresses safety concerns, community health and wellness and case management strategies.

**NURS242 PROFESSIONAL NURSING CAPSTONE CLINICAL (2)** Course allows the learner to demonstrate mastery of the clinical skills of assessment, documentation, teaching, medication knowledge and administration, prioritization, time management, and communication with clients, families, staff, and peers. Mastery of leadership, management, legal and ethical principles of delegation of the registered nurse in various community and acute care settings is also expected.

## OFFICE ADMINISTRATION

**OADM116 RECORDS AND DATABASE MANAGEMENT (3)** Prerequisites: BSKL014 and CAPP125. Management of paper, film and computer records is studied, and techniques for solving records and database management problems are discussed. Microsoft Access software is used in completion of computer projects.

**OADM118 TRANSCRIPTION SKILLS (3)** Prerequisite: BSKL020 with a grade of C or better or equivalent placement score. Consists of a concentrated drill and discussion of business English usage, punctuation and style as applied to transcription of business correspondence.

**OADM121 CALCULATORS (1)** Prerequisite: MATH101 suggested. Individualized course designed to teach touch operation of 10-key printing/display calculators along with their special timesaving features. Emphasis is placed on speed and accuracy.

**OADM123 PROFESSIONAL BUSINESS LEADERSHIP (PBL) (1)** Applied course in professional leadership to bring business and education together in a positive working relationship.

**OADM125 SKILLBUILDING FOR OFFICE SUPPORT SERVICES (1)** Individualized course designed to improve accuracy and speed. Office support services certificate candidates must achieve a grade of C in order to complete graduation requirements for the program.

**OADM127 SKILLBUILDING FOR OFFICE MANAGEMENT (1)** Individualized course designed to improve accuracy and speed. Office management degree candidates must achieve a grade of B or better in order to complete graduation requirements for the program.

**OADM132 OFFICE MANAGEMENT FOR ASSISTANTS (3)** Prerequisites: OADM116 or CAPP166 with ACCT109 or concurrent enrollment. Capstone course for office support services professional certificate. Course includes activities and information in human relations, personal and professional

qualities, decision-making, office supervision, incoming and outgoing mail, minutes, office procedures, work ethics, time management, appearance, record keeping, office organization, personnel management, and demeanor.

**OADM134 OFFICE MANAGEMENT FOR ADMINISTRATORS (3)** Prerequisites: OADM116, CAPP160, CAPP164, CAPP166, ACCT109, or concurrent enrollment. Capstone course for the A.A.S. in Business Management with Office Management Specialty. Course includes activities and information in human relations, personal and professional qualities, decision-making, office supervision, incoming and outgoing mail, minutes, office procedures, work ethics, time management, appearance, record keeping, office organization, personnel management, and demeanor.

**OADM175 OFFICE MANAGEMENT INTERNSHIP (3)** Prerequisite: OADM134 or concurrent enrollment and approval of program advisor. An on-the-job work experience which provides the student the opportunity to work in an office environment. Students are evaluated by the instructor and employer.

## PHILOSOPHY

**PHIL101 INTRODUCTORY TO PHILOSOPHY (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Introductory course in philosophy is a survey of the history, persons and perspectives related to the theory of the nature, methods and limits of knowledge. The student will be challenged to deal with concepts such as reality, truth, ethics, reason, and metaphysics.

**PHIL102 ETHICS (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. An intriguing and informative examination of some significant moral issues and the influential moral and ethical theories surrounding them. Students will develop valuable skills of critical thinking and expression while learning to recognize and more effectively address difficult moral issues that arise in today's society.

**PHIL104 LIVING RELIGIONS (3)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Survey of living religions of the world. Study will focus on Buddhism, Hinduism, Islam, Judaism, and Christianity.

## PHYSICAL EDUCATION ACTIVITY

\*PEAC courses that may be repeated. Only two semester hours of PEAC courses may be applied to an A.A. degree as electives.

**PEAC116 BUILDING FITNESS FOR LIFE I (1)** Course offers a comprehensive plan for utilizing fitness training as a means to lifetime wellness. Students explore nutritional needs, stress management and prevention of disease. Course fulfills wellness requirement for A.A., A.A.S. or A.A.T.

**PEAC117 BUILDING FITNESS FOR LIFE II (1)** Prerequisite: PEAC116. Course expands the student's knowledge and ability to develop a comprehensive plan of lifetime wellness utilizing fitness training. Course fulfills wellness requirement for A.A., A.A.S. or A.A.T.

**PEAC118 AEROBICS\* (1)** Complete fitness program designed to combine exercise and fun. Course fulfills wellness requirement for A.A., A.A.S. or A.A.T.

**PEAC119 LOW IMPACT AEROBICS\* (1- 1 1/2)** Fitness program is designed for anyone who wants to minimize the risk of injury but still enjoy an aerobic workout. Course fulfills wellness requirement for A.A., A.A.S. or A.A.T.

**PEAC121 WOMEN AND HEALTH (1)** Course is designed to provide the individual with the tools to improve a woman's health status. Historical trends in health care regarding women are discussed as well as methods for facilitating change. Personal choices and their effect on health and well-being are identified. Topics include, but are not limited to: reproductive and gynecological concerns, nutrition, exercise, weight loss, bone health, women's concerns, heart disease, sexuality, and abuse. Course fulfills wellness requirement for A.A., A.A.S. or A.A.T.

**PEAC122 APPLIED WELLNESS (1)** A different type of physical education activity class that can be enjoyed by any or all students on campus regardless of age or physical condition. It is designed to provide students with theoretical and practical experiences focusing on the relationship of lifestyle to productivity and quality of life. Course fulfills wellness requirement for A.A., A.A.S. or A.A.T.

**PEAC124 VARSITY BASKETBALL—MEN\* (1)** Participation in the men's varsity basketball program.

**PEAC125 VARSITY BASKETBALL—WOMEN\* (1)** Participation in the women's varsity basketball program.

**PEAC128 VARSITY VOLLEYBALL\* (1)** Participation in the women's varsity volleyball program.

## PHYSICAL EDUCATION — PROFESSIONAL

**PPRO101 SPORTS OFFICIATING I (2)** Includes lectures, readings, class discussions, and field experience in the officiating of fall sports—football, soccer, basketball, etc.

**PPRO102 SPORTS OFFICIATING II (2)** Includes lectures, readings, class discussions, and field experience in the officiating of spring sports—softball, baseball, volleyball, etc.

**PPRO104 CARE AND PREVENTION OF ATHLETIC INJURIES (3)** Introduction to athletic training and its administrative procedures and problems. Includes prevention and care of injuries and other special considerations.

**PPRO106 INTRODUCTION TO PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL (2)** Recommended for sophomore physical education majors and elementary education majors. The study of special methods and materials to be used in the teaching of elementary school physical education. Topics include: class organization and teaching procedures and opportunities for integrating the physical education program with the school curriculum. Course fulfills wellness requirement for A.A. or A.A.T.

**PPRO108 PHILOSOPHY OF SPORTS (2)** Study of motivation, skill and physical learning behaviors in physical education and athletics. Special problems of coaching athletics— specifically dealing with motivational, mental and behavioral problems.

**PPRO180 PROBLEMS IN PROFESSIONAL PE (1-3)** Independent study of a special problem in professional physical education under the supervision of a physical education instructor.

## PHYSICAL SCIENCE

**PHYS103 INTRODUCTION TO PHYSICAL SCIENCE (3)** Recommended: High school level algebra. Introductory course that covers the basic concepts of chemistry, physics and astronomy. Not open to students with college credit in PHYS105 or higher level course.

**PHYS105 COLLEGE PHYSICS I W/LAB (5)** Prerequisite: MATH112 or equivalent placement score or consent of instructor. Designed to meet the requirements of the various pre-professional courses. Topics include mechanics, wave motion and heat. Instruction consists of four lecture and two lab hours per week.

**PHYS106 COLLEGE PHYSICS II W/LAB (3)** Prerequisite: PHYS105. Continuation of Elementary College Physics I. Covers electricity, magnetism, optics, and modern physics. Instruction consists of two lecture and two lab hours per week.

**PHYS118 GENERAL PHYSICS I W/LAB (5)** Prerequisite: MATH130. Corequisite: MATH131. First course in calculus-based physics for the science and engineering student. Topics include mechanics, oscillatory motion and thermodynamics. Instruction consists of four lecture and two lab hours per week.

**PHYS119 GENERAL PHYSICS II W/LAB (5)** Prerequisite: PHYS118 with a grade of C or better. Continuation of General Physics I. Topics in the field of electromagnetism will be covered. Instruction consists of four lecture and two lab hours per week.

**PHYS125 TECHNICAL SCIENCE (4)** Prerequisite: MATH107. Designed to help students develop a better understanding of physics as it applies to the operation of machinery. Topics include: measurement, applied geometry, mechanics, fluids, waves, simple machine, energy and power, heat and temperature, electricity, and magnetism. Will not satisfy A.A. degree science requirement.

**PHYS180 PROBLEMS IN PHYSICS (1-3)** An independent study of a special problem in physics under the supervision of a science instructor.

## POLITICAL SCIENCE

**POLS101 AMERICAN/NATIONAL GOVERNMENT (3)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Survey course of the American government and political system. Particular attention is given to the government's origins, politics, the branches of government, and policy making. The Missouri Constitution is included to meet the requirements of Senate Bill No. 4.

**POLS102 MISSOURI CONSTITUTION (1/2)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Designed to meet requirements of Senate Bill No. 4. Intended for students testing out of history or government courses or transferring these courses from another state. Course is available on an individual basis.

**POLS103 INTRODUCTION TO POLITICAL SCIENCE (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Study of the nature of government, politics, the state, relations among states or nations, and the areas of political science. Students will make

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a preliminary examination of governmental institutions and selected political theories with an emphasis on basic principles, concepts and characteristics. Does not meet requirements of Senate Bill No. 4.

**POLS175 POLITICAL SCIENCE INTERNSHIP (4)** Prerequisite: Instructor approval required. On-the-job work experience provides an opportunity for the student to work in a state government office.

**POLS180 PROBLEMS IN POLITICAL SCIENCE (1-3)** Independent study of a special problem in political science under the supervision of a political science instructor.

## PSYCHOLOGY

**PSY101 GENERAL PSYCHOLOGY (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Introduction to the scientific study of behavior and mental processes. Includes a survey of historical and current theories, theorists and perspectives in psychology. Goals include increasing critical thinking and intellectual curiosity about psychological phenomenon and provides a basis for further study in the field. Topics may include: neurology, sensation and perception, consciousness, learning, psychometrics, personality development, and mental illness and wellness.

**PSY102 CHILD PSYCHOLOGY (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Investigation into the interaction of biological and environmental factors affecting the physiological, intellectual and emotional development of the child from conception through adolescence.

**PSY104 PSYCHOLOGY OF PERSONAL ADJUSTMENT (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Overview of the major theories, concepts and principles in psychology that can be applied to personal and social adjustment. Topics include: self-esteem, motivation, stress management, and others. Students will learn practical skills that will enhance their ability to effectively deal with life's challenges.

**PSY115 HUMAN SEXUALITY (3)** Prerequisite: BSKL020 with a grade of C or better or equivalent placement scores. ENGL101 or concurrent enrollment is recommended. Course explores the sociological, biological, and psychological aspects of human sexuality. Topics will include anatomy, social understandings of sexuality genetics, gender, reproduction, contraception, STDs, sexual violence, human sexual behavior, and sexual orientation. Same as BIO115 or SOC115.

**PSY180 PROBLEMS IN PSYCHOLOGY (1-3)** Independent study of a special problem in psychology under the supervision of a psychology instructor.

## RADIOLOGIC TECHNOLOGY

Students must be admitted to the radiologic technology program to register for RAD102-RAD180.

**RAD100 RADIOLOGIC TECHNOLOGY PREP WORKSHOP (1/2)** Students who meet minimum eligibility requirements upon application to the Radiologic Technology program will be invited to the workshop. If invited, the applicant must

attend the workshop to be considered for the Radiologic Technology program. The workshop will inform potential students of all aspects of the Radiologic Technology program and review program requirements. A test is administered to evaluate essential academic skills.

**RAD102 ORIENTATION TO RADIOLOGIC TECHNOLOGY (2)** Course provides the student with an overview of the foundations in radiologic technology and the practitioner's role in the health care delivery system. The student will prepare to become an active member of that health care delivery system and also gain an appreciation for the professional organizations and their functions.

**RAD106 CLINICAL EDUCATION I (3)** Supervised clinical rotations will be performed in basic areas of radiologic technology at assigned clinical sites. Clinical Education provides the student with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams, while practicing patient care and professionalism. Exam performance, professionalism skills and critical thinking will be evaluated in this course. Clinical Education will be conducted 16 hours per week.

**RAD108 CLINICAL EDUCATION II (3)** Supervised clinical rotations will be performed in basic and specialty areas of radiologic technology at assigned clinical sites. Clinical Education provides the student with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams, while practicing patient care and professionalism. Exam performance, professionalism skills and critical thinking will be evaluated in this course. Clinical Education will be conducted 40 hours per week.

**RAD110 CLINICAL EDUCATION III (3)** Students will progress from basic to more advanced rotations at assigned clinical sites. Clinical Education provides the student with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams, while practicing patient care and professionalism. Exam performance, professionalism skills and critical thinking will be evaluated in this course. Clinical Education will be conducted 40 hours per week.

**RAD112 CLINICAL EDUCATION IV (3)** Advanced clinical rotations will be performed in radiologic technology at assigned clinical sites. Clinical Education provides the student with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams, while practicing patient care and professionalism. Exam performance, professionalism skills and critical thinking will be evaluated in this course. Clinical Education will be conducted 24 hours per week.

**RAD114 CLINICAL EDUCATION V (3)** Advanced clinical rotations will be performed in radiologic technology at assigned clinical sites. Students will satisfactorily complete all required competencies. Clinical Education provides the student with the opportunity to practice the skills and theory taught in the classroom. The "Five Steps to Clinical Competency" allow the student to progress in competency exams, while practicing patient care and professionalism. Exam performance, professionalism skills and critical thinking will be evaluated in this course. Clinical Education will be conducted 24 hours per week.

**RAD120 RADIOGRAPHIC PROCEDURES I (3)** Students will learn and practice the proper steps in the completion of radiographic exams. Radiographic anatomy, radiation protection and patient care skills are reinforced. Students are introduced to basic film critique. This course will cover exams of the chest, abdomen and extremities. This course is a portion of the five steps to clinical competency and must be completed with a score of 85 percent or better.

**RAD122 RADIOGRAPHIC PROCEDURES II (3)** Students will learn and practice the proper steps in the completion of radiographic exams. Radiographic anatomy, radiation protection and patient care skills are reinforced. Students are introduced to basic film critique. This course will cover exams of the thorax and spine, as well as contrast studies. This course is a portion of the five steps to clinical competency and must be completed with a score of 85 percent or better.

**RAD124 RADIOGRAPHIC PROCEDURES III (3)** Students will learn and practice the proper steps in the completion of radiographic exams. Radiographic anatomy, radiation protection, and patient care skills are reinforced. Students are introduced to basic film critique. This course will cover exams of the skull and facial bones. This course is a portion of the five steps to clinical competency and must be completed with a score of 85 percent or better.

**RAD128 PATIENT CARE (3)** Provides the student with the knowledge and skill to effectively monitor, assess and care for patients in the diagnostic imaging environment. Instruction will focus on the basic concepts of routine and emergency patient care procedures, infection control, standard precautions, and the legal and ethical aspects of professional radiologic technology.

**RAD130 RADIATION PRODUCTION AND CHARACTERISTICS (3)** Students gain knowledge of electricity, electromagnetic theory, circuitry, x-ray generation, production, interaction, and the basic characteristics of natural radiation.

**RAD134 RADIOGRAPHIC EXPOSURES AND QUALITY CONTROL (3)** Students learn the factors involved in quality image production, the correlation of these factors and their control. The steps, chemistry and equipment involved in processing radiographic film will be included. Students will identify and evaluate acceptable limits for equipment operation.

**RAD136 RADIATION PROTECTION (2)** Student radiologic technologists must be able to protect patients and themselves from overexposure to radiation. Students learn about dose limits for radiation workers, proper shielding for patients and exam rooms, as well as radiation monitors and detectors.

**RAD140 RADIOLOGIC PHARMACOLOGY (3)** Course provides the student with an overview of the foundations of pharmacology, including pharmacokinetics, pharmacodynamics, pertinent laws, and safety issues. Students will gain an understanding of drug categories, their actions, and commonly used drugs in each category. Additionally, this course will emphasize contrast media commonly used in medical imaging, routes of administration and venipuncture techniques.

**RAD142 TRAUMA AND ADVANCED IMAGING (3)** Course builds on the positioning knowledge developed in the radiographic procedures courses. Advanced imaging techniques and approaches for imaging injured patients will

be discussed. Radiographic anatomy, radiation protection and patient care skill will continue to be stressed. This course is a portion of the five steps to clinical competency and must be completed with a score of 85 percent or better.

**RAD144 RADIATION BIOLOGY (2)** Students will learn about the varieties of interactions between ionizing radiation and living cells. Acute and chronic effects of radiation are described.

**RAD146 IMAGING EQUIPMENT (3)** Presents information about various recording media, emphasizing fluoroscopy, image intensification and automatic exposure devices. Advanced imaging modalities will also be discussed, including: computed tomography, digital radiography, ultrasound, magnetic resonance imaging, mammography, special procedures, nuclear medicine, and radiation therapy.

**RAD150 RADIOGRAPHIC PATHOLOGY (3)** Introductory course on pathology provides student with basic understanding of disease processes as they relate to radiographic procedures. It will include facts, etiology, symptoms, treatments, and radiographic appearance of many diseases and discuss how one must adjust the radiographic technique for each of these disorders.

**RAD152 IMAGE ANALYSIS (3)** Students use their knowledge of anatomy, positioning and exposure factors to critique radiographs and determine if radiographs are of proper diagnostic quality. After a judgment is made, the student must determine which factors require change.

**RAD154 SECTIONAL ANATOMY (3)** Students apply knowledge of systemic human anatomy to determine the sectional relationships of human organs, vessels and tissues. Knowledge of cross-sectional anatomy reinforces prior anatomical knowledge and leads to a greater understanding of modalities such as CT, MR and ultrasound.

**RAD170 PREPARING FOR PROFESSIONALISM (3)** Integration of all aspects of diagnostic radiologic technology with emphasis on procedures, technique, radiation protection, positioning, radiographic anatomy, and patient care. A series of review tests will be administered, enabling the students to identify their strengths and weaknesses. Students will prepare for employment through development of interview skills and creation of resumes.

**RAD180 PROBLEMS IN RADIOLOGIC TECHNOLOGY (1-3)** Independent study course designed to allow the students to more deeply research specific areas of radiologic technology that are of interest to them under the supervision of a radiologic technology instructor. They will also explore more advanced health care degrees and/or the managerial opportunities available to radiologic technologists.

## REAL ESTATE

**REAL105 PRINCIPLES OF REAL ESTATE (3)** An introduction to the study of real estate. Topics include legal issues, markets and market analysis, real estate finance and investment analysis, taxation, appraisal of real estate, brokerage, legal description, land-use control, and property management.

**REAL107 REAL ESTATE LAW (3)** Study of rights and interest in land, legal description, types of ownership, deeds, contracts, wills and descent, liens and mortgages, rights and obligations of landlords and tenants, zoning and land use restrictions, and the role of brokers.

**REAL110 INTRODUCTION TO FINANCE (3)** Financing business, consumer, and government activity; stocks, bonds, real estate, and financial markets; risk, insurance, inflation, cash and income management; capital accumulation and appreciation.

**REAL112 APPRAISAL OF REAL ESTATE (3)** Introduction to the theory and application of real estate valuation methods. Includes data collection and analysis, neighborhood and regional analysis, land and building description and function, highest and best use analysis, land valuation, improvement valuation, as well as market trends and influences.

## SERVICE EDUCATION

**SRVE102 EMERGING LEADERS TRAINING (1)** Course addresses subjects including social responsibility, leadership ethics, fundraising, and grant-proposal writing as it introduces students to successful community and campus leaders. A 20-hour community service component is required.

**SRVE104 SERVICE LEARNING AND CIVIC ENGAGEMENT (3)** Course examines how communities, urban and rural, address the needs of citizens through its overview of the history and theories of civic responsibility. The urban study is conducted over spring break (lab fee charged) and incorporates problem-solving and teamwork skills. A 20-hour rural community service component is required.

## SOCIOLOGY

**SOC100 GENERAL SOCIOLOGY (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Introduction to the basic principles, concepts, research strategies, and empirical findings representative of the field today. Explores the relationships of individuals and groups in the context of broader social patterns. Establishes a basis for further study in the field. Course topics may include gender and racial inequality, deviance, economic and political institutions, social mobility, and concepts related to current social and cultural change.

**SOC101 SOCIAL PROBLEMS (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores and SOC100. Examines objective social conditions that have been defined as social problems. The course focuses on gaining factual and theoretical knowledge to build better explanations for the existence and persistence of social problems in light of social controls and democratic values. Topics covered include racial inequality, gender stratification and poverty.

**SOC102 MARRIAGE AND FAMILY (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Explores the role of the individual in marriage and the family, functions of dating and courtship, variations in family forms, and marriage breakdown and alteration are also examined. Topics covered include the nature of family as a demographic, historic, ideological, economic, and legal entity.

**SOC103 INTRODUCTION TO SOCIAL WORK (3)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. Provides the student with background knowledge of the field, an overview of social problems and social services and methods of social work practice.

**SOC115 HUMAN SEXUALITY (3)** Prerequisite: BSKL020 with a grade of C or better or equivalent placement scores. ENGL101 or concurrent enrollment is recommended. Course explores the sociological, biological, and psychological aspects of human sexuality. Topics will include anatomy, social understandings of sexuality genetics, gender, reproduction, contraception, STDs, sexual violence, human sexual behavior, and sexual orientation. Same as BIO115 or PSY115.

**SOC120 AMERICAN DIVERSITY (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Overview of global and American diversity resulting from cultural interactions, especially in the areas of art, government, economics, and religion, as well as a historical perspective. Students will gain a greater understanding of diversity from an individual and community perspective. Intended for education majors.

**SOC180 PROBLEMS IN SOCIOLOGY (1-3)** Independent study of a special problem in sociology under the supervision of a sociology instructor.

## SPANISH

**SPAN101 ELEMENTARY SPANISH I (3)** Prerequisites: BSKL015 and BSKL020 with grades of C or better or equivalent placement scores. Introduces the four skills of listening, speaking, reading and writing. Differences between Spanish and American cultures are discussed. The present indicative is highlighted with the class conducted primarily in Spanish.

**SPAN102 ELEMENTARY SPANISH II (3)** Prerequisite: SPAN101 or placement. The preterite and imperfect tenses are given concentration along with reflexive constructions for students to further enhance their ability to use the four skills. Class is conducted primarily in Spanish.

**SPAN103 INTERMEDIATE SPANISH I (3)** Prerequisite: SPAN102 or placement. Emphasizing the subjunctive mood and two perfect tenses, this course seeks to concentrate on the further development of the speaking and writing skills. Relevant topics will be discussed each week and students will write two compositions and make one culture presentation. Class is conducted primarily in Spanish.

**SPAN104 INTERMEDIATE SPANISH II (3)** Prerequisite: SPAN103. Incorporating the conditional and future tenses and the imperfect subjunctive mood, students will be exposed to famous Spanish movies and literature. They will provide reflection by means of discussion and in writing. Key elements of Spanish and Latin American history will be presented. Class is conducted primarily in Spanish.

**SPAN120 SPANISH FOR THE MEDICAL PROFESSION (3)** Prerequisite: MEOF101 or consent of instructor. Beginning course for students with no background in Spanish. A concentration on terminology and phraseology for personnel in allied health professions. Students will be able to engage in basic Spanish conversation related to their current or future vocations. Course is a general education elective only for medical office majors.

## SPEECH AND THEATER

**SPTH101 PUBLIC SPEAKING (3)** Study and practice of basic techniques involved in generating, designing, delivering, and

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evaluating ideas for speech situations facing adults of our society.

**SPTH103 SMALL GROUP COMMUNICATION (3)** Presents the communication process as it relates to small group behavior, including the study of principles, methods and forms of discussion used in small groups.

**SPTH105 INTERPERSONAL COMMUNICATION (3)** Presents theories, principles and techniques of communication as they apply to one-to-one, small groups and conference interaction.

**SPTH107 INTRODUCTION TO THEATER (3)** Introductory hands-on course where students examine the major contributors to the theatrical event: the director, actor, scene designer, and lighting designer.

**SPTH110 STAGECRAFT AND LIGHTING (3)** Basics of set construction, painting, scene design, lighting design, and wood shop safety. Students will be required to spend 30 clock hours outside class time with direct involvement in operation of specialized theater equipment. Required course for speech and theater majors.

**SPTH111 ACTING I (3)** Intensive study of the techniques of acting with concentration on bodily movement, balance, diction, voice, and characterization.

**SPTH113 BASIC ORAL INTERPRETATION (3)** Includes development of the voice as an instrument of expression and analysis and performance of basic interpretive material and forms of literature.

**SPTH115 THEATER PRACTICUM (1/2-2)** Includes student participation in plays, either in performance or backstage work. No more than four credit hours of Theater Practicum may be applied toward an A.A. degree.

**SPTH119 STAGE MAKEUP (3)** Provides a hands-on look at stage makeup. Students will learn the basics of corrective, old age and effects makeup and what is required in creating a character.

**SPTH180 PROBLEMS IN SPEECH OR THEATER (1-3)** An independent study of a special problem in speech or theater under the supervision of a fine arts instructor.

## STUDENT SUCCESS

**SS100 NEW STUDENT ORIENTATION (1/2)** Course includes an orientation to mySTAR, to the online virtual classroom software, and a number of other support services provided at the college. Students will complete the College Student Inventory, meet one-on-one with an advisor and create their educational plans.

**SS101 SUCCESS 101 (1)** Designed to enable new students to make a smooth transition into college life and ultimately be successful with their educational and career goals. Topics include building relationships with students and instructors, learning the resources available to students, and strategies for successful learners. Course uses a variety of teaching methods and interactive activities.

**SS104 COLLEGE SKILLS (3)** Designed to enhance the college learning experience and prepare students for personal and professional success. Concepts presented include: time

management, managing change, setting and achieving goals, and thinking in ways to create success. Note-taking, library research, test taking, and study skills are also included.

**SS108 CAREER CHOICE (1)** Primarily intended for the college student who is undecided about a college major or related career plans. Emphasis upon making connections between self and the world of work and between academic and career planning.

**SS110 SPEED READING (1)** Prerequisite: BSKL015 with a grade of C or better or equivalent placement score. This computerized speed reading course will help students build skills needed for rapid, flexible, and efficient reading. May be repeated two additional times for credit toward a degree.

**SS120 EMPLOYMENT STRATEGIES (1)** Prerequisite: BSKL014 with a grade of C or better or equivalent placement score. Consult your program advisor for the appropriate semester to take this class. Course is designed to help students develop employment search skills and career growth potential.

## WEB DEVELOPMENT

**WEB112 WEB UTILITIES (1)** Students will discover the increased functionality and flexibility of creating effective Web content. The fundamental utilities of creative Web pages will be presented. Course will explore the vast areas of Web programming. Attention will be given to concepts most commonly encountered when using utility software.

**WEB113 WEB DESIGN (1)** Comprehensive look at the basic tools used for creating successful and practical Web pages through the use of Web design tools. Course is the foundation for Web page design. Course presents knowledge of Web design to prepare students for other courses and the job market. No previous knowledge of HTML or Web design is needed.

**WEB114 WEB SCRIPTING (3)** This course covers the use and implementation of client-side scripting languages to create interactive Web-based applications. Students will use VBScript, JavaScript and other scripting languages as appropriate to create dynamic Web applications.

**WEB116 WEB DEVELOPMENT (3)** Course is designed as a capstone course for students who have completed Database Management and Visual Basic.Net. The course is designed around the completion of a group project which will have an Access database processed using Active Server Pages technology. Students should already have a strong understanding of Access and Visual Basic because the new concepts covered in this course will mainly address the Web development aspects of the applications.

**WEB117 ADVANCED WEB DEVELOPMENT (3)** Course gives instruction in the creation of dynamic Web pages through a variety of formats. These methods may include, but are not limited to, ColdFusion, PHP, ASP, XML, and FTP.

**WEB118 WEB GRAPHICS (3)** Course provides extensive instruction into the creation and manipulation of graphics files through the software package Adobe Photoshop. Course is aimed at the Photoshop beginner who wants to create sophisticated graphics while having fun. Subjects covered will include an overview of the Photoshop screen, the toolbox, palettes, and the option bar. Special emphasis on text, layers and photo treatment will also be discussed.

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**WEB120 XML (3)** Course covers the use and implementation of XML standards in Web page creation. XML is a language for storing and delivering information on the Web. Students will learn the basic concepts of XML and how to apply these to develop dynamic HTML documents that maximize the use of browser capabilities.

**WEB125 INTRODUCTION TO DIGITAL VIDEO (1)** Course is the first in a series of three video design courses that will teach techniques for creating multimedia presentations videos. Students will receive instruction in the construction of interactive DVD video presentations through the use of multiple design formats and software. Students must purchase a mass DVD storage device.

**WEB126 INTRODUCTION TO DIGITAL AUTHORING (1)** Course is the second in the series of video design classes. Students will learn techniques for video editing, authoring, interfacing, and compression of multimedia presentations. Included will be the instruction of transferring data and information from tape to DVD.

**WEB127 DIGITAL PRODUCTION METHODS (1)** In part three of video design the student will learn the final stages of DVD presentation fundamentals and implementation, adding music to the final product, and pushing the media into a final format.

**WEB175 WEB DEVELOPMENT INTERNSHIP (4)** Provides on-the-job work experience in Web development. Student will be supervised and evaluated by the instructor.

## WELDING

**WELD101 WELDING TECHNOLOGY I (4)** Basic course beginning with instruction in the technical knowledge and skills required for oxyacetylene cutting, oxyacetylene welding and shielded metal arc welding. A minimum of two lecture hours per week will include subjects such as safety, metallurgy, welding equipment, and other technical knowledge applicable to the welding industry.

**WELD102 WELDING TECHNOLOGY II (4)** Prerequisite: WELD101. Basic course introducing plasma arc cutting for use in sheet metal and structural use in shop and field. Shielded metal arc welding is reviewed. Gas metal arc welding is introduced and used in various positions. Lecture will include subjects such as safety, metallurgy, welding equipment, and other technical knowledge applicable to welding industry.

**WELD103 WELDING TECHNOLOGY III (4)** Prerequisite: WELD102. Advanced technical welding course structured for specialized welding operations requiring a high degree of skill. The victor plate bender is used for multiple pass welding. Shielded metal arc welding and gas tungsten-Arc welding is studied and demonstrated. All welds are mastered for flat, horizontal, vertical, and overhead welding positions.

**WELD104 WELDING TECHNOLOGY IV (4)** Prerequisite: WELD103. Advanced technical welding course structured primarily for specialized welding operations requiring a high degree of skill. Students will study and master pipe welding with both shielded metal arc welding and gas-tungsten arc welding in various positions tested by the bend test.

**WELD180 PROBLEMS IN WELDING (1-8)** An independent study of a special problem in welding under the supervision of a welding instructor.

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## DIRECTORY OF SITES

Sedalia www.sfccmo.edu	3201 West 16th Street Sedalia, MO 65301 (660) 530-5800 (877) 311- 7322 (Toll Free in Missouri)
Lake of the Ozarks	3797 Hwy 54 Osage Beach, MO 65065 (573) 348-0888
Whiteman AFB	511 Spirit Boulevard Whiteman AFB, MO 65305 (660) 563-3358
Boonville Correctional Center	17524 Scenic Drive Boonville, MO 65233 (660) 882-6515
Boonslick Technical Education Center	1694 West Ashley Drive Boonville, MO 65233 (660) 882-5306
Carrollton Area Career Center	305 East 10th Street Carrollton, MO 64633 (660) 542-0000
Clinton Technical School	602 South Fifth Street Clinton, MO 64735 (660) 885-6101
Saline County Career Center	900 West Vest Street Marshall, MO 65340 (660) 886-6958
Versailles High School	913 West Newton Drive Versailles, MO 65084 (573) 378-4231
Warsaw High School	20363 Lane of Champions Warsaw, MO 65355 (660) 438-7149

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## NOTES