

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### ACCOUNTING

#### **ACCT 1003 BASIC ACCOUNTING PROCEDURES**

A study of basic accounting and bookkeeping concepts. Introduces accounting concepts for a small- to medium-size company from the standpoint of a bookkeeper, staff accountant, owner, or full charge bookkeeper. Prerequisite: [R]

#### **ACCT 2033 PAYROLL ACCOUNTING**

Basic procedures of a payroll accounting system. The study of manual systems, the various laws regulating payroll data and the preparation of the payroll tax returns. Prerequisite: ACCT 1003 or ACCT 2103

#### **ACCT 2043 COMPUTERIZED ACCOUNTING**

Independent study, analysis, design and construction of solutions to case studies in accounting automation using commonly used accounting software. Prerequisite: ACCT 1003 or 2103

#### **ACCT 2103 FINANCIAL ACCOUNTING**

A study of accounting theories and concepts involved in analyzing, processing, interpreting, and communicating decision making information for internal and external uses. This course is intended for majors and non-majors. Prerequisites: ([R] [W] and ICSM 0113) or ACCT 1003

#### **ACCT 2203 MANAGERIAL ACCOUNTING**

Managerial accounting concepts and objectives, planning and control of sales and cost, analysis, variance analysis, capital budgeting and the measurement of divisional performance. Prerequisite: ACCT 2103

#### **ACCT 2423 FUNDAMENTALS OF INCOME TAX**

Study of the present provisions of individual income tax laws and preparation of tax returns. Prerequisite: ACCT 2103

#### **ACCT 2443 INTERMEDIATE ACCOUNTING I**

Valuation and other theoretical problems in accounting for cash, temporary investments, receivables, inventories, long-term investments, plant and equipment, and intangible assets. Issues related to income determination including revenue recognition. Prerequisite: ACCT 2103

#### **ACCT 2543 INTERMEDIATE ACCOUNTING II**

A continuation of ACCT 2443. A comprehensive study of fixed assets, stockholder's equity, dilutive securities, investments, pensions, leases, error analysis, preparation and analysis of financial statements. Prerequisite: ACCT 2443

### ADDICTIONS COUNSELING

#### **AC 1103 INTRO TO ADDICTION PROBLEMS**

Surveys addictions and substance abuse in American society, outlining the major determinants of addiction, as well as the psychopharmacological, psychological and sociological aspects of addiction.

#### **AC 1113 FOUNDATIONS OF ADDICTION COUNSELING**

Examination of the major causative theories and treatment of addiction and substance abuse. Pre/Corequisite: AC 1103, PSYC 1113

#### **AC 1320 (1-4) CURRENT ISSUES IN ADDICTION COUNSELING**

Technical problems of particular interest to addictions counseling majors and practicing addictions counselors. Variable credit. Can be repeated up to six credit hours. Prerequisite: Department Head Approval

#### **AC 2213 INTRODUCTION TO GROUP DYNAMICS**

Surveys the major theories and research dealing with group processes. Prerequisite: AC 1113

#### **AC 2243 PRACTICUM IN DRUG AND ALCOHOL COUNSELING I**

150 clock hours of field experience, which allows the application of knowledge and skills learned in coursework. Prerequisites: Sophomore Standing, Department Head Approval

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### **AC 2253 PRACTICUM IN DRUG AND ALCOHOL COUNSELING II**

Field experience, which allows the application of knowledge and skills learned in coursework. Prerequisites: AC 2243, Department Head Approval

### **AC 2333 ADDICTION IN THE FAMILY**

Develops the student's understanding of the family as a basic social unit. Examines the influence of alcohol and other drugs in the family system and explores various behaviors exhibited by a chemically dependent family. Issues relating to family intervention, treatment modalities and continuing recovery will be explored. Prerequisites: AC 1113, AC 2213

## **ANTHROPOLOGY**

### **ANTH 2113 INTRODUCTORY ANTHROPOLOGY**

General anthropology: survey of anthropology, emphasizing physical and cultural anthropology and archeology. Students examine clues as to how humanity evolved and learn how knowledge of the past helps in understanding humanity today. Prerequisites: [R] [W]

### **ANTH 2050 (1-6) ANTHROPOLOGY SPECIAL TOPICS**

Variable credit course of one to six hours, maximum six credits. Examines contemporary issues and problems within anthropology. Prerequisites: [R] [W]

### **ANTH 3253 LANGUAGE AND CULTURE (H)**

This course is a cross-cultural survey of human behavior designed to introduce students to anthropological approaches to culture, linguistics, social research, and social theory. Student will examine the intersections of culture and gender, age, ethnicity and social stratification. Students will apply ethnographic field methods while executing research project in the community. Prerequisite: Sophomore Standing

## **ARCHITECTURE**

### **ARCH 1103 GRAPHIC COMMUNICATONS**

Development of fundamental drafting skills and techniques instrumental to the interpretation and utilization of visual plans and specifications within engineering, construction, and architecture. Topics: organization and relationship of drawings and specs; symbols, dimensions, scales, and notes. Same as GENT 1113 and CONS 1103. Two hours lab per week.

### **ARCH 1223 CONSTRUCTION DRAWING I**

Provides students with the functional knowledge and skills necessary to create a set of working drawings for residential construction. Includes a detailed study of architecture as a profession, drawing equipment and architecture nomenclature, light construction drawings, techniques of architectural drawings, methods of representing floor plan, elevations, plot plans, slab construction, roof plans, door and window schedules, and construction sections and details. Students learn to read and interpret light construction drawings and will be required to complete a set of residential drawings.

### **\*ARCH 1614 COMPUTER-AIDED DRAFTING I**

Introduction to computer-aided drafting (CAD) principles, using a "menu-driven" system to generate graphic output for engineering drafting applications. Problem solving skills in applied technical fields will be developed. Prerequisite: [M]

### **ARCH 2003 ARCHITECTURE AND SOCIETY**

This is the first course in the architectural history sequence. It functions, therefore, as an introduction to both the historical framework of western architecture and the profession. The course also fulfills humanities and international dimension requirements for the University at large. Consequently, a large number of students enrolled in the course are not architecture majors. In addition, in fulfilling this role, the content of the course specifically includes modern architectural examples as comparisons to the historical framework.

## Course Descriptions

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### **ARCH 2013 CONSTRUCTION DRAWING II**

Fundamentals of commercial construction drawings, preparation and interpretation of working drawings. Topics include architectural, civil and structural drawings. Lab: six hours per week. Prerequisite: ARCH 1223

### **ARCH 2252 COMPUTER APPLICATIONS IN ARCHITECTURE-PHOTOSHOP**

This is an introductory course on computer applications in architecture. Understanding the digital tools and becoming familiar with the digital design process is a vital part of the course. The course will consist of a weekly lecture, tutorial and workshop. Students are required to participate in all portions of the class including the workshop.

### **ARCH 2263 SYSTEMS AND MATERIAL**

Architectural, structural, environmental control systems and materials in architecture.

### **ARCH 2273 COMPUTER-AIDED DRAFTING II**

A continuation of ARCH 1614 with emphasis on expanding skills gained to produce more complex 2D architectural layouts and drawings, using AutoCAD. Prerequisite: ARCH 1614

### **ARCH 2322 CONSTRUCTION SPECIFICATIONS**

Construction specifications and their significance as part of the contract documents. Specification language and style follows construction specification institute format.

### **ARCH 2363 ARCHITECTURAL PRACTICES AND PROCEDURES**

This course introduces students to the practice and procedures of architecture. It will cover the AIA documents used in the design and construction of buildings; as well as the roles the architectural technician may play in the process.

Prerequisite: ARCH 1103

### **ARCH 2403 3D MODELING-INTRO TO SKETCHUP**

Advanced CAD (computer aided drafting) system operation applications with emphasis on wire frame and solid 3D CAD system models.

### **ARCH 2650 (1-4) TECHNICAL PROJECTS - ARCHITECTURAL TECHNOLOGY**

One to four, maximum four credits. Special project will be assigned by the advisor with the approval of the department head. A comprehensive written report of the work accomplished must be prepared and approved. Before credit is received an examination may also be required. Prerequisite: Department Head Approval

### **ARCH 2713 ADVANCED CAD REVIT I**

A continuation of ARCH 2273 with emphasis on expanding skills gained to produce 2D and 3D architectural layouts and drawings of residential and commercial buildings, using cutting edge 3D architecture software. Prerequisite: ARCH 1103 or CONS 1103

### **ARCH 2723 ADVANCED CAD APPLICATIONS II – REVIT II**

A continuation of ARCH 2713 with emphasis on expanding skills gained to produce 2D and 3D architectural layouts and drawings of residential and commercial buildings including mechanical, electrical, plumbing, and structural, using cutting edge 3D architecture software. Prerequisite: ARCH 2713

## ART

### **ART 1103 DRAWING I**

A drawing experience designed to build basic skills and awareness of visual relationships. A sequence of problems dealing with composition, shape, volume, value, line, gesture, texture and perspective. A variety of media explored, including computer illustration.

### **ART 1203 DESIGN I**

An introduction to visual problem solving. Organization of the two-dimensional plane using the elements and principles of design: line, shape, value, texture and color. Use of black and white and color media. Prerequisite: [R]

## Course Descriptions

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### **ART 1503 COLOR ILLUSTRATION**

Fundamentals of illustration using color media. Emphasis is given to perspective and light and shadow to depict objects. Color media include watercolor, pencils, ink, airbrush materials, pastels, collage and crayon. Prerequisite: ART 1103

### **ART 1803 INTRODUCTION TO ART (H)**

An introduction to the analysis and interpretation of visual arts. Visual, emotional, and intellectual aspects of art in painting, sculpture, printmaking, and architecture. Same course as HUMN 1803

### **ART 2050 (1-6) TECHNICAL PROBLEMS**

One to six, maximum six credits. Special topics in photography. Prerequisite: Will change according to subject matter. Lab hours may apply.

### **ART 2323 INTRODUCTION TO PHOTOGRAPHY**

A course in the theory of black and white photography with practical experience in the use of the camera, its variables (shutter, aperture, film), darkroom techniques and the theory of design as it applies to photography. This includes an extended lab for practical application of the camera and darkroom techniques. A fully adjustable 35mm camera is required.

## ASTRONOMY

### **ASTR 1104 ELEMENTARY ASTRONOMY (N)**

Introduction to the structure of the universe, including star characteristics, our solar system, and lesser bodies. Lecture only. Prerequisites: [R] [M]

## BIOLOGY

### **BIOL 1012 BIOLOGICAL AND MEDICAL TERMINOLOGY**

Introduction to the use of Latin and Greek common roots, stems and combining forms in structuring biological and medical terminology. Prerequisite: [R]

### **BIOL 1124 INTRODUCTION TO ENVIRONMENTAL SCIENCE (L, N)**

An introductory study of the relationships of organisms with each other and the physical environment. Topics include sustainable resource management, environmental hazards, and the impacts of human populations. Prerequisites: [R], ICSM 0113

### **BIOL 1212 HUMAN ANATOMY LAB (L)**

Laboratory supplementing BIOL 1515. Includes dissection and study of the human cadaver. Enrollment requires credit or concurrent enrollment in BIOL 1515. This course will provide laboratory credit for students who in an approved LPN or paramedic program. Four hours of lab per week. Prerequisites: [R], ICSM 0113; Pre/Corequisite: BIOL 1515

### **BIOL 1303 PRINCIPLES OF BIOLOGY (N)**

A course focusing on the general principles of biology for both majors and non-majors. Topics include genetics, evolution, taxonomy, cellular biology, and ecology. Special emphasis is given to the scientific method and experimental design as applied to cellular, organismal, population, and ecosystem biology. This course plus BIOL 1311 meets the general education criteria for a laboratory science. Prerequisites: [R], ICSM 0113

### **BIOL 1311 PRINCIPLES OF BIOLOGY LABORATORY (L)**

Laboratory supplementing BIOL 1303. It is suggested to have previously taken or take BIOL 1303 with this course. Prerequisites: [R], ICSM 0113

### **BIOL 1404 PLANT BIOLOGY (L, N)**

Survey of the plant kingdom and its importance to humans. This course includes plant anatomy and physiology, genetics, plant breeding, evolution, and growth and development. Emphasis is given to the importance of plants to humans and

## Course Descriptions

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applying the scientific method and experimental design to plants. This course includes a laboratory component.

Prerequisites: [R], ICSM 0113

### **BIOL 1515 HUMAN ANATOMY AND PHYSIOLOGY (N)**

Structure and function of the human body. Emphasis is on the study of functions in the body and a basic knowledge of gross anatomy. This course does not fulfill the anatomy and physiology requirements for the nursing program. This is a lecture-only class. Prerequisites: [R], ICSM 0113

### **BIOL 1604 ANIMAL BIOLOGY (L, N)**

Survey of the principle phyla of the animal kingdom with emphasis on basic zoological principles. Four hours lab per week. Prerequisites: [R], ICSM 0113

### **BIOL 2214 HUMAN ANATOMY (L, N)**

Morphology of the human body and its systems. Laboratory includes dissection and study of the human cadaver. Four hours lab per week. Prerequisites: [R], ICSM 0113

## **BIOMANUFACTURING TECHNOLOGIES**

### **BMFT 1002 ASEPTIC TECHNIQUES**

A laboratory course to introduce the skills for the preparation of sterile solutions and environments, and the aseptic procedures to prevent contamination. Lab: 4 hours per week. Prerequisites: [R], [W], [M]

### **BMFT 1113 INTRODUCTION TO LABORATORY MANAGEMENT**

A course to introduce areas of laboratory management for routine operations and regulatory compliance. Emphasis will be placed on the development of standard operating procedures (SOPs), compliance with regulatory body procedures, labeling, and record keeping. Associated soft skills relevant to the working environment will be developed. Prerequisites: [R], [W]

### **BMFT 1134 INTRODUCTION TO LABORATORY EQUIPMENT**

An introduction to a variety of common laboratory equipment and their safe uses. Topics include centrifugation, chromatography, spectrophotometry, pumps, probes, and computer software systems. Lab: 4 hours per week. Prerequisites: CHEM 1154

### **BMFT 2203 BIOREACTORS AND CELL CULTURE**

A practical application of variables that influence the growth of cultures for optimum yield of products in bioreactors. The course will cover the operation, sampling, maintenance, and control of bioreactors. The course will also provide students with practice in common cell culture techniques, including mammalian tissue culture and bacterial culture. Lab: 4 hours per week. Prerequisites: BIOL 1303, BIOL 1311, BMFT 1002

### **BMFT 2232 CELL HARVESTING**

Current practices used in downstream processing to harvest product. Students are introduced to the operations that release and extract products from cells, concentrated from media, and remove impurities. Lab: 4 hours per week. Prerequisites: BIOL 1303, BIOL 1311

### **BMFT 2254 DOWNSTREAM LABORATORY OPERATIONS**

The course introduces students to a variety of downstream processing methods and procedures. Techniques include filtration, enzymatic modification, and packaging. Particular emphasis is given to process control, documentation, and quality control. Lab: 4 hours per week. Prerequisites: BIOL 1303, BIOL 1311

### **BMFT 2273 CHROMATOGRAPHY**

Students develop knowledge of downstream processes for the purification of products using common chromatography techniques within the biomanufacturing industry. Techniques include size-exclusion, affinity, and ion-exchange chromatography on instruments such as HPLC and FPLC. Lab: 4 hours per week. Prerequisites: CHEM 1315

### **BMFT 2302 CURRENT PRACTICES IN BIOMANUFACTURING**

This course follows the current good practices (cGxP) for laboratory (cGLP), manufacturing (cGMP), clinical (cGCP), documentation (cGdocP), and distribution (cGDP) for quality management. The principles of “define, document, validate, and implement” will be discussed and applied to relevant examples. The future of biomanufacturing will be explored. Prerequisites: BMFT 1102

## Course Descriptions

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### **BMFT 2332 REGULATORY COMPLIANCE IN BIOMANUFACTURING**

This course explores the roles of regulatory bodies in the oversight of laboratory operations and pharmaceutical production. The practical application of policies in the industry will be discussed. Prerequisites: BMFT 2254

### **BMFT 2353 ADVANCED LABORATORY MANAGEMENT**

A continuation of BMFT 1003 that expands on routine laboratory operations and regulatory compliance in laboratory. Personnel management and soft skills relevant to the workforce will be further developed. Prerequisites: BMFT 1003

### **BMFT 2373 INDUSTRY PRACTICUM**

Placement with industry partners to apply the knowledge and skills learned in the course work. Lab: 20 hours per week. Prerequisites: Department Head approval required.

## BUSINESS

### **BUS 1320 (1-4) TECHNICAL PROBLEMS-BUSINESS**

One to four, maximum six credits. Technical problems in business that are of particular interest to the business environment. Prerequisite: Instructor Approval

### **BUS 1333 PERSONAL FINANCE**

An introductory course covering personal budgeting, consumer loans, credit cards, personal insurance, savings and investment accounts, social security, home ownership, bank services, personal taxes, estate and retirement planning, career and financial planning, and leasing arrangements. Prerequisites: [R], ICSM 0113

### **BUS 1523 INTRODUCTION TO BUSINESS**

Surveys the basic business functions, principles and practices in the administration of business organizations. Examines business in society and the interactions of business with the competitive, economic, political/legal, social/cultural and technological environments. Prerequisite: [R]

### **BUS 1610 SPECIAL TOPICS IN BUSINESS**

The study and/or analysis of a selected topic in Business. Examines contemporary issues and problems. This course may be cross-listed with other technical problems or special topics sections. May be repeated with a different topic. Variable course credit of one to six hours. Prerequisite: [R]

### **BUS 2013 INTRODUCTION TO IRS FORM 990**

Focuses on the requirements for development and submission of the IRS form 990 and the various schedules and attachments required by the U.S. Federal Government for non-profit organizations. This includes requirements for board disclosure and policies. Prerequisites: [R] [W]

### **BUS 2023 BUSINESS STATISTICS**

Explores descriptive measures, elementary probability, sampling, estimation and testing, regression and correlation and analysis of variance. Prerequisite: Any college level Math

### **BUS 2033 BUSINESS ETHICS**

A study of contemporary and classical views relating to moral judgements and conduct within the business environments. Prerequisites: [R] [W]

### **BUS 2040 (1-6) ADVANCED TECHNICAL PROBLEMS - BUSINESS**

One to six, maximum six credits. A study of applied problems that are of particular interest to the business environment. Prerequisite: Instructor Approval

## Course Descriptions

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### **BUS 2113 BUSINESS COMMUNICATIONS**

Introductory course of communications skills needed in the 21st century business environment. Includes communication strategy, delivering written and oral presentations, working in teams, and virtual meetings. Focuses on the methods of preparing effective business communication using technology, critical thinking, analytical reasoning and problem solving skills. Prerequisites: [R] [W]

### **BUS 2333 BUSINESS LAW**

An introduction to the principles of law in relation to business. Topics include law of contracts, law of agency, law of property and sales and negotiable instruments. Special attention is given to practical business problems and their legal implications. Prerequisites: [R] [W]

### **BUS 2613 BUSINESS PLAN DEVELOPMENT**

Supervised course experience that is project-driven. Student will work as an individual or with a team to develop a business plan that addresses the entire business concept including implementation. This course exposes the student to real-world experiences and enhances his/her entrepreneurial skills. Prerequisite: Advisor Approval Required

### **BUS 2750 (1-6) INTERNSHIP**

Supervised work experience that permits students to apply classroom knowledge. Work assignments must be meaningful and must be approved by department head prior to commencing internship. Supervisor will be required to submit a final evaluation report upon completion of internship. Before credit is given, a comprehensive written report of the work accomplished must be prepared by the student and approved by the department head. Prerequisites: Sophomore Standing, Department Head Approval

## CHEMISTRY

### **CHEM 1104 BASIC CHEMISTRY (L, N)**

A one-semester course in preparation for the general chemistry sequence or for students whose degree plan has a one-semester chemistry requirement. This course includes fundamental knowledge of inorganic chemistry; with laboratory. Four hours lab per week. Prerequisites: [R], ICSM 0113

### **CHEM 1154 GENERAL, ORGANIC AND BIOCHEMISTRY (L, N)**

Chemistry course recommended for allied-health and veterinary technology majors. This course includes unit conversions, nomenclature, chemical bonding, stoichiometry, solutions, gas laws, acids and bases, organic chemistry, and introductory biochemistry. This course includes a laboratory. Prerequisites: [R] [M]

### **CHEM 1214 CHEMISTRY I (L, N)**

A course recommended for students in applied sciences, including paramedical sciences. This course includes nomenclature; stoichiometry; atomic structure; chemical bonding; solutions; gas laws and thermochemistry with laboratory. Two hours lab per week. Prerequisites: [R] [M]

### **CHEM 1315 GENERAL CHEMISTRY I (L, N)**

An algebra-based course. The first of a two-semester sequence in general chemistry. This course includes nomenclature, atomic and molecular structure, stoichiometry, bonding, states of matter, thermochemistry, acids and bases, and gas laws; with laboratory. Prerequisites: (MATH 1483 or 1513), (CHEM 1104 or CHEM 1154 or High School Chemistry)

### **CHEM 1515 GENERAL CHEMISTRY II (L, N)**

An algebra-based course. This course is a continuation of CHEM 1315 with emphasis on kinetics, equilibrium, thermodynamics, electrochemistry, qualitative analysis, organic chemistry, biochemistry, and nuclear chemistry; with laboratory Prerequisite: CHEM 1315

### **CHEM 2014 INTRODUCTION TO ORGANIC CHEMISTRY (L, N)**

One semester organic chemistry course recommended for allied-health majors. Includes aliphatic and aromatic nomenclature, structure, stereochemistry, selected mechanisms and reactions. No laboratory is required for this course. Prerequisite: CHEM 1154 or CHEM 1315

## Course Descriptions

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### **CHEM 2055 ORGANIC CHEMISTRY I (L, N)**

Beginning organic chemistry course recommended for science majors and pre-professional students. Includes aliphatic and aromatic nomenclature, structure, stereochemistry, selected mechanisms and reactions with an introduction to interpretive spectroscopy. Lab: three hours per week. Lab recitation: one hour per week. Prerequisite: CHEM 1515

### **CHEM 2115 QUANTITATIVE ANALYSIS (L, N)**

This course provides an introduction to analytical chemistry including selected methods of analysis and the statistical treatment of experimental data. Concurrent enrollment in CHEM 2115L is required. Prerequisite: CHEM 1515

### **CHEM 2155 ORGANIC CHEMISTRY II (L, N)**

This course continues the development of the chemistry of functional groups with emphasis on aldehydes and ketone, carboxylic acid, amines and phenols in both aliphatic and aromatic compounds then concludes with the introduction of the biological molecules. Mechanisms and stereochemistry are emphasized in all reactions. Lab: three hours per week. Lab recitation: one hour per week. Prerequisite: CHEM 2055

## **COMPUTER INFORMATION SYSTEMS**

### **CIS 1003 WINDOWS**

Course is designed to give the student basic knowledge of Microsoft Windows and its uses. Students will be given projects using Windows features and will learn how other software programs link to Windows. Prerequisite: ICRW 0035

### **\*CIS 1113 COMPUTER CONCEPTS WITH APPLICATIONS**

Provides students with an introduction to concepts and applications of the personal computer in business. Topics include spreadsheets, databases, word processing, presentations, ethics, vocabulary, Internet skills and file system management. Theory and hands-on computer instruction is included. This introductory course is intended for students with existing computer skills. Prerequisite: [R]

### **CIS 1123 PROGRAMMING FUNDAMENTALS**

Designed for both computer science majors and non-majors to give fundamental knowledge of computer programming concepts. Students will learn accepted programming concepts and style. This course involves logic, pseudo-code, flow charts, statement sequencing, conditional statements, loop structures and input/output. Prerequisite: [R]

### **CIS 1320 (1-6) TECHNICAL PROBLEMS-CIS**

The study and/or analysis of a selected topic in Computer Information Systems. May be repeated with a different topic. Variable credit. Can be repeated up to six hours. Prerequisite: Department Head Approval

### **CIS 1433 GAME DEVELOPMENT**

This course is an overview of game development from the creative and theoretical standpoint. Students will learn to analyze games and game play elements, examine games and trends in gaming, and formulate their own outline for an ideal game. Prerequisite: [R]

### **CIS 1453 CHARACTER DEVELOPMENT**

This course will introduce students to the tools and concepts used to create storylines and develop characters. It will allow students to create games that inform the audience about the character's personality, history, thought processes, etc. Prerequisite: CIS 1433

### **\*CIS 1503 MICROCOMPUTER APPLICATIONS-MS OFFICE**

Familiarizes the student with fundamental terminology and concepts of microcomputers, their operating systems and disk management, as well as major production applications including word processing, spreadsheets, data base management systems, and may include graphics, data communications and desktop publishing. Familiarity with computer keyboard is recommended. Hands on computer instruction. Prerequisite: [R]



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### **\*CIS 2013 C++ LANGUAGE PROGRAMMING**

Introductory course in C++ using object-oriented programming. This includes basic control structure, files, input/output, single and multi-dimensional arrays, searching and sorting. Programs developed using structured design techniques. Prerequisite: CIS 1123

### **\*CIS 2023 C# (SHARP) PROGRAMMING**

Introductory course in C# using object-oriented programming. This includes basic control structures. Programs developed using structured design techniques. Prerequisite: CIS 1123

### **\*CIS 2033 PYTHON PROGRAMMING**

Programming and problem solving using Python. The course will emphasize principles of the software development cycle, procedures and functions, object-oriented programming, and an understanding of fundamental programming concepts such as data structures. Prerequisite: CIS 1123

### **\*CIS 2103 LEVEL DESIGN CONCEPTS**

This course will introduce students to the tools and concepts used to create levels for games. It will incorporate level design and architecture theory, concepts of "critical path" and "flow." Students will build and test levels that reflect design concepts.

### **\*CIS 2150 (1-6) ADVANCED TECHNICAL PROBLEMS-COMPUTER PROGRAMMING**

One to six, maximum six credits. A study of applied problems of particular interest to the computer programmer. Prerequisite: Department Head Approval

### **\*CIS 2263 SPREADSHEET APPLICATION**

An in-depth study of the use and theoretical concepts of integrated microcomputer software spreadsheet application. Hands-on instruction involves individual aspects of computerized spreadsheets, as well as the integration of all spreadsheet components. Prerequisite: CIS 1113 or CIS 1503

### **\*CIS 2323 JAVA**

Introductory course in Java using object-oriented programming. This course includes basic control structures, files, input-output, single arrays, searching, sorting, graphics, event handling, interface components and programming for the Internet. Prerequisites: CIS 1123

### **\*CIS 2343 ADVANCED C++ PROGRAMMING**

An advanced course in object-oriented programming in the C++ language with a prerequisite of prior programming experience. This course includes dynamic memory allocation, linked list, stacks, queues, binary trees, polymorphism, inheritance and encapsulations. The design process is object-oriented. Prerequisite: CIS 2013

### **\*CIS 2363 DATABASE DESIGN**

Provides students with basic knowledge of database planning, design and implementation. Exercises will take the student through database planning, design and construction, implementation and maintenance. Prerequisite: CIS 1113 or CIS 1503

### **\*CIS 2433 ADVANCED C# (SHARP) PROGRAMMING**

This course is designed to strengthen the student's knowledge of advanced programming techniques through the study of object-oriented methods in C# (Sharp). The course studies topics such as internet, web, and database applications and applying web-based services with C#(Sharp). Prerequisite: CIS 2023

### **\*CIS 2463 DATABASE APPLICATIONS**

The student will use a selected database management program to create and edit database files. The student will also search, organize and build reports, forms and templates with the database files. Prerequisite: CIS 2363

### **\*CIS 2513 PRINCIPLES OF INFORMATION SECURITY**

This course provides the student with a broad review of the field of information systems security, background on many related elements and enough detail to facilitate an understanding of the field. It covers terminology of information systems security, the history of the field and an overview on how to manage an information systems security program. Prerequisite: [R]

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### **\*CIS 2613 COMPUTER INFORMATION SYSTEMS (CIS) PROJECT MANAGEMENT**

This course addresses the process and skills needed for successful project management in the computer information systems and technology environment of business. Topics include project scoping, estimating, scheduling, budgeting, tracking, and controlling. The course uses Microsoft Project software. Prerequisites: [R] [W]

### **\*CIS 2650 (1-4) TECHNICAL PROJECTS - COMPUTER PROGRAMMING**

One to four, maximum four credits. Special project will be assigned by the department head. A comprehensive written report of the work accomplished must be prepared and approved. Before credit is received, an examination may also be required. Prerequisite: Department Head Approval

### **\*CIS 2703 SYSTEMS ANALYSIS AND DESIGN**

Introduction to a methodology for the analysis, design, documentation, implementation and evaluation of computer systems. Included will be topics in techniques for data gathering, file organization and accessing methods. Prerequisite: CIS 2013 or CIS 2023

### **\*CIS 2713 SYSTEMS DEVELOPMENT AND IMPLEMENTATION**

Development of data processing system from the analysis of present information flow, system specification and equipment selection to implementation of the system. A continuation of CIS 2703 with practical adaptation and/or experience of the topics previously surveyed. Prerequisite: CIS 2703

### **\*CIS 2803 CAPSTONE**

As the capstone course of the Information Systems and Technologies programs, the student will demonstrate the collected knowledge, skills and techniques acquired in the program courses by working through scenarios. Students will demonstrate problem solving, critical thinking, research techniques and technical writing. Computer ethics and group dynamics will be emphasized to help round out the student's education. Prerequisite: Department Head Approval

## CONSTRUCTION

### **CONS 1103 BLUEPRINT READING & DRAFTING FOR CONSTRUCTION**

Development of fundamental drafting skills and techniques instrumental to the interpretation and utilization of visual plans and specifications within engineering, construction, and architecture. Topics: organization and relationship of drawings and specs; symbols, dimensions, scales, and notes. Same as ARCH 1103 and GENT 1113. Two hours lab per week.

### **CONS 1123 INTRODUCTION TO BUILDING CODES**

Introduction to current building codes including BOCA (Building Officials and Code Administrators) applications. (Offered on demand)

### **CONS 1133 INTRODUCTION TO ELECTRICAL CODES**

Introduction to current electrical codes as they apply to buildings. (Offered on demand)

### **CONS 1143 INTRODUCTION TO PLUMBING CODES**

Introduction to current plumbing codes as they apply to buildings. (Offered on demand)

### **CONS 1153 INTRODUCTION TO MECHANICAL CODES**

Introduction to current mechanical codes as they apply to buildings. (Offered on demand)

### **CONS 1214 INTRODUCTION TO CONSTRUCTION**

Overview of the entire construction industry with emphasis on construction materials, methods and systems. Introduction to both building and highway construction drawings and their interpretation. Same as SURV 1214.

### **CONS 2003 OSHA FOR RESIDENTIAL & COMMERCIAL CONSTRUCTION**

The student will review occupational safety & health administration (OSHA) as they apply to the planning and construction of residential and commercial properties. Students will earn basic (30 hour) certification in OSHA safety standards.

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **CONS 2050 (1-6) ADVANCED TECHNICAL PROBLEMS CONSTRUCTION**

One to six, maximum six credits. A study of problems in applied engineering science that is of particular interest to the engineering technician.

### **CONS 2103 INTRODUCTION TO CONSTRUCTION MANAGEMENT**

A study of organization, management, economics and labor relations pertaining to projects during the construction phase.

### **CONS 2112 ELECTRICAL EQUIPMENT OF BUILDINGS**

A basic course in application of electrical, lighting, heating and power distribution. Topics include fundamentals of electric motor starters and controls, and basic planning and design of wiring systems. (Offered on demand)

### **CONS 2113 MECHANICAL EQUIPMENT OF BUILDINGS**

Plumbing, heating and air conditioning as it pertains to residence and small commercial buildings. Design and working drawings on plumbing and heating problems.

### **CONS 2123 CONSTRUCTION LAW**

Legal issues arising from design and construction services, focusing on risk management and liability which affect the construction process. Students will gain an understanding of construction contracts, subcontract, schedule delays, bonds and insurance. Upon completion of this course a general knowledge of the legal aspect affecting the construction industry and projects. Prerequisite: CONS 2103

### **CONS 2203 CONSTRUCTION PLANNING AND SCHEDULING**

This course will introduce the student to effective methods of planning, scheduling, monitoring and controlling construction projects. The techniques covered in this class are also applicable to the management of any other project-oriented activity. Emphasis will be placed on network scheduling techniques, both manual and computer based. Prerequisite: CONS 2103

### **CONS 2213 STRUCTURAL INSPECTION**

Orientation to the correct code requirements on applications, techniques and inspection of reinforced concrete, structural block and pre-stressed concrete. (Offered on demand)

### **CONS 2233 GREEN BUILDING SYSTEMS & LEED CONSTRUCTION**

The purpose of the course is to provide an overview of the green building market within construction, with importance placed on high performance green building systems, renewable onsite energy, water efficiency and minimization of the building impact on the environment. An understanding of sustainability and green building systems will be gained at the completion of the course. An understanding of the US Green Building Council Leadership in Energy and Environmental Design (LEED) building rating program will also be covered. Prerequisite: CONS 1214

### **CONS 2243 LEED STANDARDS & CONSTRUCTION**

The course will provide an understanding of the U.S. green building council leadership in energy and environmental design (LEED version 3, 2009) and other green building rating programs in both residential and commercial construction. The course will cover the history, practice, implementation and benefits of green building programs. At the completion of the course, students will have an understanding of the different credits and prerequisites of LEED, along with an understanding of green building programs. Prerequisite: CONS 2233

### **CONS 2333 CONSTRUCTION PRACTICES AND PROCEDURES**

Light, heavy and industrial construction. Foundation layout, framing and finish work, site investigations, excavation, pre-cast concrete, tilt up, structural steel and metal building construction and project management.

### **CONS 2342 CONSTRUCTION INSPECTION PRINCIPLES**

Problems and considerations pertinent to maintaining adequate quality control on construction projects. Prerequisite: ARCH 1313

### **CONS 2343 CONCRETE AND ASPHALT CONSTRUCTION**

Production techniques for placing and finishing concrete. Design of concrete form work. Concrete testing techniques. Theory and techniques for placing masonry construction units, field and laboratory techniques and field procedures of asphalt construction.

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **CONS 2423 CONSTRUCTION ESTIMATING I**

Computing the quantities and cost of materials and labor involved in residential and light commercial construction. Includes bidding procedures and computer applications. Prerequisite: CONS 1214

### **CONS 2523 CONSTRUCTION PROCEDURES II**

Principles, practices and methods of industrial and heavy construction. Topics include earth quantities and productivity of equipment. Lab: three hours per week. Prerequisite: CONS 2423

### **CONS 2623 CONSTRUCTION ESTIMATING II**

A continuation of Construction Estimating I, with emphasis on detailed quantities of materials and labor of building construction estimates. Topics include the preparation of an estimate and bidding procedures. Prerequisite: CONS 2423

## **CRIME VICTIM/SURVIVOR SERVICES**

### **CVSS 1103 VICTIMOLOGY**

An introduction to victimology, with special emphasis on family violence, sexual violence, child abuse, homicide, the criminal justice system, crime victim compensation, crime victim rights and related issues. Prerequisite: [R] [W]

### **CVSS 1113 VICTIM SERVICES**

An overview of community services dealing with victims of crime, including social, support, crisis intervention, prevention and support services, as well as criminal justice and others systems. The course focuses on the role and response of crime victim advocates and service agencies in addressing the needs of victims of crime. Prerequisites: [R] [W], CVSS 1103; Corequisite: CVSS 1103

### **CVSS 1213 GRIEVING PROCESS**

Explores the issues relating to grief that individuals experience when faced with the loss of someone or something important to them. The stages of grief, bereavement, mourning and guilt will be explored, as well as interventions that helping professionals can utilize when dealing with those who have suffered a loss. Prerequisite: PSYC 1113

### **CVSS 1320 (1-6) CVSS-TECHNICAL PROBLEMS**

One to six, maximum six credits. Technical problems will be explored, which are of particular interest to crime victims/survivor services majors.

### **CVSS 2050 (1-4) CVSS-TECHNICAL PROJECTS**

One to four, maximum four credits. The department head will assign special projects. A comprehensive written report (or comparable assignment) of the work accomplished must be prepared and approved by the instructor. Before credit is received, an examination may also be required.

### **CVSS 2113 ABUSE AND EXPLOITATION OF CHILDREN**

Child Abuse and neglect are examined from psychological, familial, social, legal and cultural contexts. Social and legal systems, reporting requirements, ethical considerations, prevention and intervention resources are explored. Prerequisites: [R] [W]

### **CVSS 2123 RAPE AND SEXUAL ASSAULT**

Reviews the phenomenon of rape, myths about rape and rapists, treatment of rape victims, discussion of physical and psychological preparation for possibility of attacks. Understanding the complexity of these issues will be gained by considering psychological, familial, social, legal and cultural contexts of victimization. Prerequisites: CVSS 1103, CVSS 1113

### **CVSS 2223 LEGAL POLICY IN VICTIM SERVICES**

A look at the traditional legislative process and an analysis of the tools of advocacy with government agencies. A discussion of the use of the media in victim services. Current legal rights for victims will be surveyed. Prerequisites: CVSS 1103, POLS 1113

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **CVSS 2233 DOMESTIC AND FAMILY VIOLENCE**

The typology and history of family abuse, including legal guidelines, treatment approaches, emotional abuse, sexual abuse, spousal abuse, elderly abuse and child abuse. Prerequisites: CVSS 1103, CVSS 1113

### **CVSS 2313 STRESS MANAGEMENT FOR SERVICE PROVIDERS**

Provides students with the knowledge, skills and attitudes necessary to understand the causes and effects contributing to the stress created by being in a helping profession. Methods of dealing with this stress and taking care of self will also be addressed.

### **CVSS 2323 SPECIAL POPULATIONS IN VICTIM SERVICES**

A focus on the additional problems cultural diversity presents for victims in our society. A survey of the history of biased responses and the current need for innovative services for these victims will be addressed. Prerequisites: CVSS 1103, CVSS 1113

### **CVSS 2333 INTRODUCTION TO CRISIS INTERVENTION**

A focus on the process and the effects of victimization. A discussion of counseling direct and indirect victims through hot lines, stress reduction, support groups, referrals, etc. will be discussed. Prerequisites: CVSS 1103, PSYC 1113

### **CVSS 2343 CURRENT TRENDS IN VICTIM SERVICES**

A systematic analysis of current trends in criminal victimization and the criminal justice process. Victim impact, perpetrator information, victim service needs, ethical, legal and policy considerations will be explored for selected crime areas. Elder abuse, stalking, and other crimes will be explored in depth. Prerequisites: CVSS 1103, CVSS 1113

### **CVSS 2413 ETHICS**

This course will prepare students to deal with the professional and ethical issues that most affect the actual practice of counseling or serving as an advocate for victims and survivors of crime. Topics to be covered include dealing with ethical dilemmas, the law, limits of confidentiality and dealing with informed consent and the rights of victims. Prerequisite: CVSS 1103

### **CVSS 2511 PROFESSIONAL PRINCIPLES IN VICTIM SERVICES**

This course examines appropriate conduct in the work environment and the cultures of several agencies that impact the lives of crime victims. Prerequisite: Department Head Approval; Corequisite: CVSS 2512

### **CVSS 2512 OCCUPATIONAL PROFICIENCY**

This course is designed to evaluate the graduate's proficiency in their major field of study. Areas to be assessed include communication skills, job interviewing techniques and professional competencies. Prerequisite: Department Head Approval; Corequisite: CVSS 2511

### **CVSS 2513 PRACTICUM**

This course will give the student the opportunity to apply knowledge and skills learned in the crime victim/survivor service course work. The practicum will be completed in a facility that can give the student related, hands-on experience in the area of emphasis selected. Prerequisites: Sophomore Standing, Department Head Approval

## **EARLY CARE EDUCATION**

### **ECCD 1101 THE EARLY CARE PROFESSIONAL**

This course will introduce students to the Early Care Education program and the profession of early care education in Oklahoma. Students will learn the expectations of the Early Care Education program and options for transferring to a university program following completion of the AAS. This course will reinforce computer skills needed for online/hybrid courses. Students will begin the development of their academic portfolio. This course is the GATEWAY for all ECCD courses and should be taken prior to OR concurrently with the remaining early care education courses.

### **ECCD 1103 INTRODUCTION TO CHILD CARE MANAGEMENT**

An Introduction to planning and effectively implementing administrative systems that carry out an Oklahoma licensed child care facility's program mission, goals, and objectives. Students receive an overview of the various types of Oklahoma licensed programs available in the early care education field. Emphasis is given to advocating for young children and the

## Course Descriptions

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programs serving children, the NAEYC Code of Ethics and Program Administrators supplement, as well as OKDHS licensing regulations, Oklahoma's Reaching for the Stars, the Oklahoma Early Learning Guidelines, state fire codes, health codes, and national credentialing/ accreditation programs. One (1) clock hour of supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better.

### **ECCD 1113 PERSONNEL SUPERVISION**

Leadership, supervisory and group facilitation styles, communication styles, and techniques of conflict resolution are explored. The ability to recruit, hire, supervise, coach, and motivate diverse staff to high levels of performance as well as develop and implement appropriate staff evaluation tools and disciplinary steps including termination are emphasized. Components of an Early Care Education Personnel Handbook are discussed. One (1) clock hour of supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better.

### **ECCD 1123 FOUNDATIONS OF EARLY CHILDHOOD EDUCATION AND CARE**

A practical introduction to the field of early childhood with focus given to care provided in Oklahoma licensed early care education facilities. Emphasis is given to the history of early childhood, awareness of cultural influences and backgrounds, the need to understand child growth and development, developmentally appropriate practices, positive guidance, the importance of observational skills and the inclusion of children with differing abilities. The National Association for the Education of Young Children Code of Ethical Conduct and the importance of advocating for young children and quality care are highlighted. The Oklahoma Early Learning Guidelines (ELG's) are incorporated into course content. One (1) clock hour of supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better.

### **ECCD 1133 CHILD HEALTH, SAFETY AND NUTRITION**

An introduction to the interrelationship of child health, safety, and nutrition using a holistic environmental approach. Emphasis is given to application in Oklahoma licensed early care education environments. This includes the management of a safe indoor/outdoor environment, infection control, emergency response procedures and promoting good nutrition. Students will receive clear concise thought provoking information reflective of the latest developments and practices in the field regarding SIDS, fetal alcohol syndrome and otitis media. No supervised fieldwork experience is required. Students earning a Certificate of Mastery or Associate of Applied Science degree in the OSU-OKC Early Care and Child Development program must earn a "C" or higher in this course.

### **ECCD 1141 CHLD PASSENGER SAFETY & TRANSPORTATION**

Training and Education provided meets the approved child passenger safety course required by OKDHS Licensing Regulations for Child Care Centers/Homes for programs providing transportation for children younger than six years of age. Focus is given on Oklahoma's current legislation for child passenger restraint, and the proper installation and use of child passenger restraints. Students earning a Certificate of Mastery or Associate of Applied Science degree in the OSU-OKC Early Care and Child Development program must earn a "C" or higher in this course.

### **ECCD 1233 COMMUNICATION, LEADERSHIP & TECHNOLOGY**

Covering the fundamental elements of effective written, verbal and nonverbal communication, this course focuses on enhancing interactions with staff, co-workers, children, families and the community. Leadership styles and peer mentoring is explored. Students develop and deliver an oral presentation including handouts and visual/technological aids. Extensive use of technology as means to effective communications with families is introduced and applied including blogging and web pages. Marketing and public relations, as well as working with media entities are also covered. Four (4) clock hours of supervised/directed field experience assignments must be completed at an approved site. Pre/Corequisite: ECCD 1101

### **ECCD 1243 OBSERVING AND ASSESSING THE YOUNG CHILD**

An in-depth study regarding the process of gathering information as a way to support children's development, facilitate child-centered curriculum planning, and design effective learning environments for young children in a variety of early childhood settings. Students are introduced to the Ages and Stages Questionnaire the Early Childhood Environmental Rating Scale, and practice using multiple methods of observation and assessment techniques such as anecdotal records, checklists, frequency counts, program assessments, and more. The importance of the "crosswalk" between developmental milestones and Oklahoma's Early Learning Guidelines (ELGS) is emphasized. The Oklahoma ELG's Infants, Toddlers, Twos, and Young Children Three to Five are incorporated in course content. Four (4) clock hours of

## Course Descriptions

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supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better.

### **ECCD 1320 (1-4) ECCD-SPECIAL TOPICS**

One to four, maximum six credits. Directed individual study or class in specific topics relating to early care education and administration.

### **ECCD 2013 PLAY, DAP, AND CURRICULUM DEVELOPMENT**

An exploration into the theory of play, developmental stages of play, and how play impacts a young child's growth, development, and memories. Students implement environmental designs that foster children's learning. Students support learning through play as they explore various methods used to develop lesson plans that integrate children's interest, abilities, and needs into focus areas such as music, art, blocks, language arts, mathematics, dramatic play, manipulatives and loose parts, and sensory materials. The Oklahoma ELG's Infants, Toddlers, Twos; and Young Children Three to Five are incorporated in course content. Four (4) clock hours of supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better.

### **ECCD 2113 CHILD DEVELOPMENT**

An introduction to the most common theories of child development. The physical, cognitive, social and emotional development from prenatal through adolescence is explored. The Oklahoma Early Learning Guidelines (ELG's) for Infants/Toddlers/Twos and Young Children Three to Five years are incorporated into course content. No supervised fieldwork experience is required. Students earning a Certificate of Mastery or Associate of Applied Science degree in the OSU-OKC Early Care and Child Development program must earn a grade of "C" or better in this course.

### **ECCD 2123 CHILD AND FAMILY IN THE COMMUNITY**

Socialization in a developmental context regarding the child, socialization for high self-esteem in healthy families and socialization in regard to the early care facility/child/family and community are all covered within this course. Student will also explore methods of effectively interacting with families of diverse cultures. Two (2) clock hours of fieldwork experience must be completed by attending a session at an instructor approved family court site. Students earning a Certificate of Mastery or Associate of Applied Science degree in the OSU-OKC Early Care and Child Development program must earn a "C" or higher in this course.

### **ECCD 2133 INFANT/TODDLER PROGRAMMING**

A study of prenatal development, birth and infancy through 35 months of age. Special emphasis placed on program planning, implementation and evaluation of developmentally appropriate programs and environments for infants, toddlers and two-year olds. Theory pertaining to physical, cognitive and social emotional development also discussed. Infancy through 35 months of age as a critical period in the psychosocial development of the individual highlighted. The Oklahoma Early Learning Guidelines (ELG's) are incorporated in the content. Ten (10) clock hours of supervised field work experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an OSU-OKC Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better in this course.

### **ECCD 2143 LANGUAGE DEVELOPMENT & EMERGING LITERACY**

A study of theory, materials, methods and instructional techniques applicable to language and cognitive development, and emergent literacy experiences during the early childhood years - birth through age eight. Emphasis given to young children birth - 3 years. This course examines developmentally appropriate, integrated and interdisciplinary language arts approaches to literacy development encompassing writing, reading, and oral language of young children in the home, early care, and school environments. The Oklahoma Early Learning Guidelines (ELG's) are incorporated into course content. One (1) clock hour of supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an OSU-OKC Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better in this course.

### **ECCD 2153 SOCIAL AND EMOTIONAL DEVELOPMENT IN INFANTS AND TODDLERS**

Focuses on social and emotional development from birth to three years. Sensitive, supportive and responsive caregiving that meet the needs and interests of infants and toddlers is emphasized. Developmentally appropriate expectations and environments supporting the social and emotional development of infants and toddlers are studied and emphasized. One (1) clock hour of supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility.

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

Students earning an OSU-OKC Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better in this course.

### **ECCD 2163 PHYSICAL DEVELOPMENT AND CREATIVE EXPRESSIONS**

Focuses on creativity, play, and motor development with developmentally appropriate creative experiences including play, music, art and motor skills for children birth to three years. Physical development prenatal to three years is emphasized. One (1) clock hour of supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an OSU-OKC Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better in this course.

### **ECCD 2213 INCLUSION IN EARLY CARE EDUCATION**

A study of inclusion within the Early Care Education program: environment, curriculum and interactions with family members while serving children with varying physical, emotional, developmental and behavioral needs. Student will study the various characteristics of physical and mental disabilities, while exploring characteristics of diverse needs of young children. Individualized Education Plans (IEP) and Individualized Family Service Plans (IFSP) and Points of Inclusion are also covered. Two (2) clock hours of supervised directed field experience assignments must be completed at an instructor approved, early care education site whose enrollment includes a substantial percentage of children with special needs. Students earning a Certificate of Mastery or Associate of Applied Science degree in the OSU-OKC Early Care and Child Development program must earn a "C" or higher in this course.

### **ECCD 2233 CHILD GUIDANCE, BEHAVIOR AND CLASSROOM MANAGEMENT**

Students are provided with solid child guidance theories reinforced with positive strategies that increase their understanding of the child behavior and guidance process. Students gain knowledge in developmentally appropriate child guidance, different caregiving styles, specific positive discipline strategies, and managing the physical environment effectively. Special topics in child guidance are covered including children and stress, understanding and management of guiding children expressing anger and aggression. The Oklahoma Early Learning guidelines (ELG's) are incorporated into the class. Twenty-one (21) clock hour of supervised fieldwork experience must be completed at an OSU-OKC ECCD approved early care facility. Students earning an OSU-OKC Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better in this course.

### **ECCD 2323 BUDGET DEVELOPMENT & RISK MANAGEMENT**

Designed to acquaint students with methods of budget planning, development and fiscal control for early care education facility operations including family child care homes. Students become acquainted with the child care trilemma, OKDHS child care subsidy program, per child cost, year-end statements, tax reporting, and liability risk management. Students explore and develop facility utilization factors, annual budgets, monthly budgets, break-even charts, cash flow projections, and salary compensation scales. Students discuss effective fundraising and financial software designed for child care facilities. Staffing Patterns and efficient staff scheduling are also covered. This course requires no supervised fieldwork experience. Students earning a Certificate of Mastery or Associate of Applied Science degree in the OSU-OKC Early Care and Child Development program must earn a grade of "C" or better in this course. Pre/Corequisites: ECCD 1101, 1113

### **ECCD 2412 PRACTICUM**

Practicum consists of student and instructor directed experiential learning through fieldwork experience, aka clinical hours, and guided situational role-plays. Students earning an AAS degree in Early Care Education are required to complete 110 clock hours of supervised fieldwork experience throughout the duration of ECCD coursework. Students successfully completing OSU-OKC ECCD courses will have accumulated clock hours of required fieldwork experience as designated by each course description. The Practicum course provides students the format to complete the remaining required clock hours of fieldwork experience to total 110 clock hours. Students earning an OSU-OKC Early Care Education Certificate or Associate of Applied Science degree must earn a grade of "C" or better in this course. Prerequisite: Department Head Approval; Corequisite: ECCD 2513

### **ECCD 2513 OCCUPATIONAL PROFICIENCY**

The course is designed to evaluate the graduate candidate's proficiency in the major field of study, reinforcing their competency level and integration into the workplace. In addition, students are provided information and connections for transferring their earned AAS degree to a Bachelor of Science degree. Areas to be assessed include students' knowledge and skill while applying the Oklahoma early childhood core competencies, administrative leadership competencies, and organization of thought and use of good judgment in accordance with NAEYC Code of Ethical Conduct as exhibited in a variety of role-playing exercises. The Oklahoma Early Learning Guidelines (ELG's) are incorporated into the class.



## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

Students must complete with 80% satisfaction, the multicomponent Early Childhood Exam. This three credit hour class includes 8 clock hours of required fieldwork experience in the form of the Final Assessment Process that is typically held on a Saturday. Students earning an OSU-OKC Early Care Education Associate of Applied Science degree must earn a grade of "C" or better in this course. Prerequisite: Department Head Approval; Corequisite: ECCD 2412

### ECONOMICS

#### **ECON 2013 INTRODUCTION TO MACROECONOMICS**

A study of the basic principles of demand and supply, national income accounting, business cycles, inflation and unemployment, determinants of the level of output, employment and prices, money and banking, fiscal and monetary policy, economic growth, and international trade and finance. Prerequisites: [R] [W], ICSM 0113

#### **ECON 2023 INTRODUCTION TO MICROECONOMICS**

A study of the basic principles of demand and supply, elasticity, opportunity cost, utility analysis, production and costs, market structures, factor markets, government regulation, globalization and international trade. Prerequisites: [R] [W], ICSM 0113

### ELECTRONICS ENGINEERING

#### **EET 1102 ELEMENTS OF ELECTRICITY AND ELECTRONICS**

An introduction to the elementary principles of basic electric units, OHM's law, circuit solutions of series and parallel network, magnetism, inductance and capacitance.

#### **EET 2224 ELECTRONIC AMPLIFIERS I**

A study of the theory and application of amplifiers using bipolar and FET transistors. Bias stabilizing and feedback techniques along with RC coupling, direct coupling and transformer coupling circuits will be studied in this course. Prerequisite: EET 1102

#### **EET 2234 ANALOG AND DIGITAL SYSTEMS**

The course studies basic numbering systems, Boolean algebra, logic circuits and systems, pulse circuits and pulse logic systems as applied to computer and microprocessor technology, ADC, DAC, and operational amplifiers. The course also includes closed loop system analysis and PID control theory to show how a digital device can control an analog system. Prerequisite: EET 1102

### EMERGENCY MEDICAL SERVICES PARAMEDICINE

#### **EMSP 1104 EMERGENCY MEDICAL RESPONDER**

This course places an emphasis on basic knowledge and skills necessary to provide lifesaving interventions with minimal equipment while waiting additional EMS response. Upon completion of this course the student will obtain their certification in Basic Life Support for the Healthcare Provider, registration with the State of Oklahoma as an Emergency Medical Responder (EMR), and be eligible to become Nationally Registered as an EMR. Lab: two hours per week.

#### **EMSP 1143 EMS OPERATIONS**

The student will summarize and interpret legal responsibilities of safe ambulance operations in Oklahoma; evaluate psychological and physical factors affecting safe emergency vehicle operations. The student will discuss medical incident command, hazardous materials incidents, crime scene awareness, rescue awareness, helicopter operations, critical care transport and usage, trauma triage guidelines, and medical operations. The student will understand techniques for gaining access to the patient, disentanglement, patient movement, and preparation for transport; and recognize situations posing threats to patients, EMT's or bystanders and describe correct management situations. The student will also be able to

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

demonstrate and understand the essential concepts of Crew Resource Management. Successful completion of EMSP 1148 is also required in order to sit for the National Registry of EMTs cognitive and psychomotor exams.

### **EMSP 1148 EMERGENCY MEDICAL TECHNICIAN**

This course is designed to prepare students to enter the prehospital emergency medical services field and provide basic life support. This course meets or exceeds the requirements of the National Emergency Medical Services Education Standards as well as the recommended training hours provided by the Oklahoma State Department of Health. Curriculum includes over 144 hours of classroom lectures and hands-on skills as well as at least 60 hours of field and clinical internship experiences. Prerequisite: Advisor Approval Required

### **EMSP 1234 PHARMACOLOGY**

This course is designed to introduce students to the principals of pharmacology, medication administration, medication classes, and utilization of emergency medications. The student will demonstrate comprehensive understanding of pharmacokinetics, pharmacodynamics, routes of administration, indications, contraindications, dosage and the ability to apply knowledge to determine the appropriate management within the paramedic scope of practice. Prerequisite: BIOL 1515

### **EMSP 1246 PARAMEDIC CARE I**

This course will prepare the paramedic student for general physical assessment, a deeper understanding of physiology and pathophysiology as well as an introduction to advanced airway management and ventilation therapy. It will include clinical time in an emergency department, ambulance and geriatric center. It is designed to cover the well-being of paramedics, their roles and responsibilities, injury and illness prevention, medical/legal issues, ethics, therapeutic communications and life span development. Discussion and review of medical mathematics, history taking, and techniques of physical examination, patient assessment, clinical decision making, communications, and documentation is included. Upon successful completion of this course the paramedic student will also be able to define normal cellular physiology, how cells respond and change to injury, geriatrics and other causes of disease, self-defense mechanisms, inflammation, and variances of immunity stress and disease. Prerequisite: EMSP 1148 (EMT), Department Head Approval; Corequisite: BIOL 1515

### **EMSP 1263 ECG INTERPRETATION**

This course introduces the student to the basics of dysrhythmia interpretation, performance and interpretation of twelve lead ECG to allow the Paramedic to treat the patient with acute myocardial infarction, as well as reviews the anatomy and physiology of the cardiovascular system. This course includes both lecture and exercise time in which the student may receive hands on rhythm interpretation practice via use of oscilloscope and paper rhythm strips. The course is designed for students with an interest or a need in improving or developing rhythm interpretation skills. Corequisite: BIOL 1515

### **EMSP 1348 PARAMEDIC CARE II**

The student will accurately describe airway management/ventilation (including rapid sequence intubation), venous access, trauma systems, mechanism of injury, hemorrhage & shock, soft tissue trauma, burns, head & facial trauma, spinal trauma, thoracic trauma, abdominal trauma, musculoskeletal trauma, & environmental conditions. The student will integrate fluid therapy and advanced airway care into correct management of the patient with respiratory disorders; and/or trauma to soft tissues, the central nervous system, and the musculoskeletal system. Students will spend clinical time in the following areas; ambulance, emergency department, psychiatric unit, trauma ICU, operating room, and respiratory therapy. Prerequisite: EMSP 1246

### **EMSP 1721 EMERGENCY VEHICLE OPERATIONS**

This course combines both didactic (8 hours lecture) and practical (16 hours driver training) aspects of instruction in preparation for emergency vehicle operations. The goal of this course is to provide participants with the skills and knowledge necessary to operate their ambulances so that the vehicle, equipment, crew, and patients will be delivered safely and efficiently and the safety of the public will be assured during all phases of the delivery of emergency medical services involving the ambulance. Prerequisite: EMSP 1148

### **EMSP 2549 PARAMEDIC CARE III**

The student will expand heavily on their knowledge of pathophysiology and overall patient management on top of what they have learned in previous semesters. The student will apply their knowledge and skills in the following medical areas including but not limited to advance cardiology, endocrinology, infectious/communicable diseases, abdominal/gastro-intestinal disorders, hematology, toxicology, and shock/resuscitation. The student will also be introduced to the concept of

## Course Descriptions

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Team Leader as well as Team Member and will be evaluated as such during all scenarios. The student will learn all aspects of Advanced Cardiac Life Support including treatment algorithms and megacodes. Field and hospital clinical practicums are an integral part of the course. Prerequisites: EMSP 1234, EMSP 1263, EMSP 1348

### **EMSP 2563 PARAMEDIC CONCEPTS FOR THE EXPERIENCED HEALTHCARE PROVIDER**

In this course, experienced healthcare providers will incorporate the knowledge, practice and ethical behavior necessary for safe and effective paramedic practice. The focus of this course will be on advanced airway management, advanced invasive skills, affective domain, and the critical thinking of associate degree paramedics. Learning experiences include both lecture and hi-fidelity simulation. Prerequisite: EMSP 1148 and previous formal acceptance into the accelerated paramedic program for experienced healthcare providers.

### **EMSP 2559 PARAMEDIC CARE IV**

This course will allow the paramedic student to complete their initial EMS training. The student will complete their Paramedic Internship at a local EMS agency. The student will be required to successfully complete their internship with a minimum of 50 "Team Leads" during 911 Emergencies. The student will also expand on their pathophysiology knowledge in the areas of labor and delivery, pediatrics, Pediatric Advanced Life Support, geriatrics, and other special patient populations. The student will complete clinical time in the following areas: ambulance, pediatric emergency department, pediatric ICU, labor and delivery, as well as complete a final 'Gatekeeper' shift with EMS Program's Medical Director. At the conclusion of this course, the student will be able to sit for both the National Registry of EMT written and Practical exams. Prerequisite: EMSP 2549

## ENGINEERING

### **ENGS 2113 STATICS**

Resultants of force systems, static equilibrium of rigid bodies and statics of structures. Shear and moment diagrams. Prerequisite: PHYS 2014

### **ENGS 2123 ELEMENTARY DYNAMICS**

Dynamic equilibrium of particles and bodies. Work-energy and impulse momentum principles. Prerequisite: ENGS 2113

### **ENGS 2143 STRENGTH OF MATERIALS**

Bending moments, deformation and displacements in elastic and plastic deformable bodies. Prerequisites: PHYS 2014, MATH 2265, ENGS 2113

### **ENGS 2213 THERMODYNAMICS**

Properties of substances and principles governing changes in form of energy. First and second laws. Prerequisites: CHEM 1515, PHYS 2014 (Offered on demand)

### **ENGS 2613 INTRODUCTION TO ELECTRICAL SCIENCE**

Elements of electrical engineering. AC and DC circuits, mesh and node formulation of network equations, steady-state response to sinusoids, energy, power and power factor. Lab: three hours per week. Prerequisites: PHYS 2114 (Summer and on demand)

## ENGLISH

### **ENGL 1013 INTERNATIONAL FRESHMAN COMPOSITION I**

Restricted to students whose native language is not English. Special attention to problems of English as a second language. Intensive writing instruction, focusing on analysis. Emphasizes strategies for reading critically, analyzing texts from diverse perspectives, and developing substantive written assignments through systematic revision, addressing specific audiences, integrating sources, and expressing ideas with clarity and correctness. May be substituted for ENGL 1113. Prerequisites: [R] [W]

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **ENGL 1033 INTERNATIONAL FRESHMAN COMPOSITION II**

Restricted to students whose native language is not English. Intensive writing instruction focused on analysis, argument strategies, research, and revision. Students produce academic writing using different argument forms with attention to audience, clarity, and correctness. Emphasis is on the researched argument, including evaluating, integrating, and citing academic sources. May be substituted for ENGL 1213. Prerequisite: ENGL 1013 or ENGL 1113

### **ENGL 1113 ENGLISH COMPOSITION I**

Intensive writing instruction, focusing on analysis. Emphasizes strategies for reading critically, analyzing texts from diverse perspectives, and developing substantive written assignments through systematic revision, addressing specific audiences, integrating sources, and expressing ideas with clarity and correctness. Prerequisites: [R] [W]

### **ENGL 1213 ENGLISH COMPOSITION II**

Intensive writing instruction focused on analysis, argument strategies, research, and revision. Students produce academic writing using different argument forms with attention to audience, clarity, and correctness. Emphasis is on the researched argument, including evaluating, integrating, and citing academic sources. Prerequisite: ENGL 1113

### **ENGL 2050 (1-6) SPECIAL TOPICS IN ENGLISH (H)**

Special topics with variable credit in English will be explored. These special topics include but are not limited to: African-American Literature, Introduction to Rhetoric and the exploration of specific authors or literary movements.

### **ENGL 2103 INTRO TO GRANT WRITING AND ADMINISTRATION (H)**

Participants in this course will examine the entire grant proposal development process including research tools and techniques, criteria for narrowing the funding, effectively organizing and writing the proposal, packaging the proposal, follow-up and tracking. The course will provide practice and hands on work in the writing of a grant proposal for funding. This course will also offer grant administration, metrics, evaluation and reporting. Prerequisite: ENGL 1113

### **ENGL 2333 INTRODUCTION TO TECHNICAL REPORT WRITING**

Intensive writing instruction focused on clear communication and conciseness. Course helps students hone technical communication skills while writing of definitions, process descriptions, proposals, and other major reports. Prerequisite: ENGL 1113

### **ENGL 2353 AMERICAN INDIAN LITERATURE (H)**

General survey of various types of traditional and contemporary American Indian writing, particularly legends, myths, oratory, poetry, short stories, novels and memoirs. Prerequisite: ENGL 1113

### **ENGL 2413 INTRODUCTION TO LITERATURE (H)**

Concentrates on close readings of masterpieces in fiction, drama, and poetry. Prerequisite: ENGL 1113

### **ENGL 2513 INTRODUCTION TO CREATIVE WRITING (H)**

Literary composition with emphasis on techniques and style through readings and writings in fiction, playwriting, poetry, and creative non-fiction. Prerequisite: ENGL 1113

### **ENGL 2543 BRITISH LITERATURE I (H)**

Survey of major literary works and movements from the beginning to 1700. Prerequisite: ENGL 1113

### **ENGL 2653 BRITISH LITERATURE II (H)**

Survey of major literary works and movements from the Romantic Period to present. Prerequisite: ENGL 1113

### **ENGL 2773 AMERICAN LITERATURE I (H)**

A survey of major American writers and literary movements from the colonial period to the Civil War. Prerequisite: ENGL 1113

### **ENGL 2883 AMERICAN LITERATURE II (H)**

A survey of major American writers and literary movements from the Civil War to present. Prerequisite: ENGL 1113

### **ENGL 3163 WORLD LITERATURE I (H)**

A survey of literary works from classical antiquity to 1650. Prerequisite: ENGL 1213

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **ENGL 3173 WORLD LITERATURE II (H)**

Selected literary masterpieces exemplifying ideals and values in non-western cultures. Emphasis on the study of non-western literature available in English. Prerequisite: ENGL 1213

## **FIRE PROTECTION**

### **FIRE 1712 PHYSICAL FITNESS FOR FIREFIGHTERS**

This course will provide students with the physical fitness knowledge and skills required for the entry level training as a firefighter. Students will learn about firefighter health and wellness topics and be provided information about the typical entry-level firefighter candidate testing processes. This course meets the prerequisite requirement of the National Fire Protection Association (NFPA) 1001 standard for Fire Fighter Professional Qualifications for persons entering a Firefighter I training program.

### **FIRE 1725 FIREFIGHTER I**

Prepares students to the level of Firefighter I as defined by the National Fire Protection Association (NFPA) 1001 Standard for Fire Fighter Professional Qualifications. Students completing the course with a grade of "C" or better will be eligible for certification by the International Fire Service Accreditation Congress (IFSAC) and Oklahoma Fire Service Training (FST) as Firefighter I. Live fire training and certification testing will be conducted by Fire Service Training in Stillwater, Oklahoma. Student must complete and pass FIRE 1733 Hazardous Materials Operations (FIRE 1733) before certification of Firefighter I is granted by IFSAC and FST. Lab: 2 hours per week. Medical release from a physician is required.

### **FIRE 1733 FIREFIGHTER II & HAZARDOUS MATERIALS**

Hazardous Materials & Firefighter II is an ad-vanced course that is designed to build upon the knowledge acquired by the student from completing the FF I course. This course provides the student with more knowledge of fire ground and hazardous materials situations to allow them to make basic evaluations of safety problems and assume leadership roles when carrying out emergency response operations. Prerequisite: FIRE 1725

### **FIRE 2050 (1-4) ADVANCED TECHNICAL PROBLEMS IN FIRE PROTECTION**

One to four, maximum six credits. Technical problems in fire protection that are of particular interest to the fire service professional.

### **FIRE 2122 FIRE & EMERGENCY SERVICES INSTRUCTOR**

This course prepares potential fire and emergency services instructors for planning instruction, using a variety of Instructional methods, teaching diverse learners and evaluating course outcomes. The course also provides guidelines for addressing the critical issues of safety, the legal issues of training and opportunities for students to participate in application activities. On successful conclusion of the course, students are eligible to sit for the IFSAC Fire and Emergency Services Instructor I certification exam.

### **FIRE 2303 PUMPING DRIVER/OPERATOR**

This course will provide the student with the knowledge of general principles of pump operations, along with practical application of those principles in an emergency situation. Students will gain the requisite knowledge of safe driving techniques, fire pump theory and operation, hydraulic calculations, water shuttle, apparatus maintenance and apparatus positioning to maximize efficiency and water supply. Prerequisite: FIRE 1733

### **FIRE 2343 FIRE PREVENTION AND LIFE SAFETY**

The student will acquire an understanding of fire prevention and life safety, its importance in risk-reduction, and how to deliver fire and life safety presentations at the shift level to the diverse populations normally found within a community. Prerequisite: FIRE 1733

### **FIRE 2353 STRATEGY AND TACTICS**

This course is a study of the principles and methods of various emergency scene command operations. This course will include simple and complex incident command operations. Students will participate in scenario based exercises to practice the initial command operations and learn to expand the command structure as the incident grows. Prerequisite: FIRE 1733

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **FIRE 2663 FIRE COMPANY OFFICER**

The course identifies the requirements necessary to perform the duties of a first line supervisor. This course introduces the student to the basic concepts of management and supervision by concentration on such topics as Organizational Structure, Communication Skills, Human Resource Management, Public Relations, Planning, Emergency Service Delivery and Safety, and Application of Professional Ethical Standards.

### **FIRE 2383 INSPECTION PRACTICES AND FIRE SCENE PRESERVATION**

This course will provide the student with additional knowledge of fire protection systems. Students will gain the requisite knowledge of fire protection systems as referenced in the National Fire Protection Association (NFPA) 1031 and 1033 standards at the Fire Inspector I and Fire Investigator levels. Prerequisite: FIRE 1733

### **FIRE 2393 FIEFIGHTER OCCUPATIONAL SAFETY, HEALTH AND WELLNESS**

The student will acquire an understanding of adhering to an organization's safety and health policies, maintaining a healthy lifestyle, the need to correct unsafe behavior, and addressing issues related to cancer and suicide prevention within the fire service. Prerequisite: FIRE 1733

### **FIRE 2650 (1-6) TECHNICAL PROJECTS IN FIRE PROTECTION**

One to six, maximum six credits. A study of problems in fire protection that are of particular interest to the fire service professional.

### **FIRE 2703 FIRE PROTECTION CAPSTONE**

This course will place the non-fire department employed, fire protection student with various metropolitan fire departments to participate in day-to-day activities and emergency response operations. All students will participate in a writing intensive, assessment-based course. The written assignments will present the student with thought provoking issues occurring in today's fire service in order for the student to demonstrate critical thinking, problem solving and communication skills in the application of knowledge acquired in the fire protection degree program. Prerequisites: FIRE 1712, FIRE 1733

## **GENERAL TECHNOLOGY**

### **GENT 1103 PRINT READING**

This course gives students an introduction to the different schematics used in electrical and mechanical systems. Students will gain an understanding of the standard symbols used in the various systems schematics and how to read them. Students learn how to read basic piping and instrumentation diagrams, and how to interpret single line electrical diagrams.

### **GENT 1112 TOOLS, TECHNOLOGY, AND EQUIPMENT FOR TECHNICIANS**

An introduction into the use of tools and equipment used in industrial processes. Topics include the use of meters, gauges, transducers, and thermometers. A review of the scientific principles to control a process' temperature, pressure and fluid flow will be studied. Plus, calibration concepts and techniques of instrumentation will be introduced.

### **GENT 1113 ESSENTIALS OF MECHANICAL AND ARCHITECTURAL DRAFTING**

Development of fundamental drafting skills and techniques instrumental to the interpretation and utilization of visual plans and specifications within engineering, construction, and architecture. Topics: organization and relationship of drawings and specs; symbols, dimensions, scales, and notes. Same as ARCH 1103 and CONS 1103 Two hours lab per week.

### **GENT 1123 TEAM WORK AND PROBLEM SOLVING**

The course will study team concepts and problem solving techniques to assist project teams in improving quality and productivity by providing knowledge of how to form and work as a team; plan and conduct good meetings; manage logistics and details; gather useful data, and communicate the results to implement changes.

### **GENT 1134 AC/DC THEORY**

Review of elementary principles of electricity, OHM's law, circuit solutions, magnetism, inductance and capacitance. This course also introduces transient analysis, network theorems, resonant circuits, filters, AC power, and computer aided circuit analysis techniques. Pre/Corequisite: MATH 1483

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **GENT 1143 COMPUTATIONS FOR TECHNICIANS**

This course studies number systems, dimensional analysis, Boolean algebra, exponential, logarithmic, trigonometric functions and systems of equations used by industrial technicians. It uses spreadsheets, Matlab or equivalent software to solve a variety of problems in introductory engineering analysis: such as graphing data, unit conversions, simple statistical analysis, sorting, searching and analyzing data, curve fitting, interpolation, solving algebraic equations, logical decisions, comparing economic alternatives, and finding optimum solutions. The acquisition and processing of data are also covered. Prerequisite: MATH 1483

### **GENT 1153 INTRODUCTION TO MECHATRONICS/MECHANICAL SYSTEMS**

An introductory course in the theory and operation of Mechatronics and Mechanical systems. The course presents foundational concepts in mechatronics including analog and digital electronic sensors, actuators, microprocessors, and microprocessors interfacing to electromechanical systems. Components and measurement equipment used in the design, installation, and repair of mechatronic equipment and circuits are studied. Pre/Corequisite: Math 1483

### **GENT 1313 INTRODUCTION TO OCCUPATIONAL SAFETY**

A course in industry safety, giving an overview of state and national regulations in safety. The course will also cover the basic areas of an industrial safety program, as well as reporting, investigating and analyzing the results.

### **GENT 1320 (1-6) TECHNOLOGICAL PROBLEMS**

One to six credits. A study of problems in the field of applied technology that are of particular interest to currently employed technicians. Prerequisite: Instructor and Advisor Approval (Offered on demand)

### **GENT 1513 BASIC ELECTRICAL CODE AND INSPECTION**

This course is a study of the basic principles of electrical circuits, motors and generators as well as basic wiring principles based on the National Electrical Code. Also included is a survey of the provisions and requirements of all electrical devices and circuits, which are covered in the National Electrical Code. (Offered on demand)

### **GENT 2050 (1-6) ADVANCED TECHNOLOGICAL PROBLEMS**

One to six credits. A study of problems in applied engineering science that are of particular interest to the engineering technician. (Offered on demand)

### **GENT 2223 MOTORS & GENERATORS**

A study of the operation and maintenance of motors and generators, including an in-depth look at the common components and contrasting operating procedures.

### **GENT 2313 HYDRAULICS AND MECHANICAL SYSTEMS**

An introduction to operation and maintenance of the mechanical and hydraulic systems.

### **GENT 2323 STATICS**

Force, distributed forces, reactions, free body diagrams, friction, internal forces and moments of inertia. Applications are emphasized. Prerequisites: PHYS 1114, MATH 1613 (Fall and Spring Only)

### **GENT 2353 FLUID MECHANICS**

This course is an introduction into fluid mechanics. It studies the properties of fluids and fluid flow, Bernoulli's theorem, measuring devices, viscosity, and dimensional analysis. It emphasizes pumps, piping, and fluid motors. Prerequisite: GENT 2313

### **GENT 2543 PROGRAMMABLE LOGIC CONTROLLERS**

This course teaches the student an overview of the selection, programming, operation, and capabilities/limitation of programmable logic controllers.

### **GENT 2600 (1-6) INTERNSHIP**

This course provides on-the-job training for students. Work experience may be substituted if the student is currently working in the industry. Prerequisite: Advisor approval

### **GENT 2653 TECHNICAL PROBLEMS**

A project will be approved by the instructor for the students to design, build, and demonstrate their knowledge of the problem. A comprehensive written report of the work accomplished will be prepared that demonstrates the collected

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

knowledge, skills, and techniques acquired in the program of study. It also includes basic numbering systems, Boolean algebra, logic circuits and systems, pulse circuits and pulse logic systems as applied to computer and microprocessor technology demonstrate problem solving, critical thinking, research techniques, technical writing, and team dynamics to help round out the student's education. Four hours lab per week. Prerequisite: Department Head Approval

### GEOGRAPHY

#### **GEOG 2253 WORLD REGIONAL GEOGRAPHY (I)**

The world's major culture regions, with emphasis on geographic aspects of contemporary economic, social and political relationships with the physical environment. Prerequisites: [R] [W]

### GEOLOGY

#### **GEOL 1114 PHYSICAL GEOLOGY (L, N)**

Composition and structure of the earth and the modification of its surface by internal and external processes. Emphasis upon mineral resources, sources of energy and environmental aspects of geology. Field trips required. No credit for students with prior credit in GEOL 1014 - General Geology. Lab: two hours per week. Prerequisites: [R] [M]

#### **GEOL 1224 HISTORICAL GEOLOGY (L, N)**

Earth history, with major emphasis on mountain building, development of continents and oceans and evolution of animals and plants. Field trips required. Lab: three hours per week. Prerequisite: GEOL 1114

### HEALTHCARE MANAGEMENT

#### **HCM 1103 INTRO TO BILLING AND CODING**

This introductory course will explore the vital roles of the billing and coding departments for healthcare operations. Students will gain a general understanding of medical coding and medical billing including how the two areas work together for the overall success of healthcare revenue cycle management.

#### **HCM 1143 HEALTHCARE INTRODUCTION TO OPERATIONS**

An overview of healthcare delivery systems including different models and components and their applications. A brief historical summary, the interface of public and private organizations and review of the various personnel who comprise these systems, will be examined in relation to their impact on healthcare delivery.

#### **HCM 1153 HEALTHCARE LAW & ETHICS**

This course will review local, state and federal legislation as they relate to healthcare systems and delivery, as well as analyze relevant medicolegal principles and concepts. An overview of medical ethics will be presented, and a variety of related ethical issues will be explored.

#### **HCM 1173 HEALTHCARE BILLING**

This course covers the role of the medical biller throughout the revenue cycle process from preauthorization and data entry to insurance payments and collections. The various insurance types including: Medicare, Medicaid, and workers' compensation will be included with an overview of billing regulations and compliance including fraud, abuse, HIPAA, and HITECH. Understand the 3 major code sets (CPT®, ICD-10-CM, and HCPCS Level II), how to apply medical necessity standards, and how to use the code books. Pre/Corequisite: BIOL 1012

#### **HCM 1183 HEALTHCARE CODING**

This course covers procedural coding guidelines for the ICD-10-CM classifications, CPT coding, evaluation and management, primary care, anesthesia/general surgery, the integumentary system, orthopedics, cardiology, OB/GYN, radiology, pathology and laboratory. This class uses curriculum aligned with the AAPC CPC National certification exam. Pre/Corequisite: BIOL 1012



## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **HCM 2133-ADVANCED HEALTHCARE CODING**

This course is designed to provide advanced practice in healthcare coding, and can serve as a test prep for the national certification exam for coding professionals (CPC). Prerequisite: HCM 1183

### **HCM 2000 (1-4) SPECIAL TOPICS IN HEALTHCARE ADMINISTRATION**

Variable credit course of one to four hours. This course examines issues within the field of Healthcare Administration. Can be repeated for credit with different topic. Prerequisite: Department Head Approval

### **HCM 2103 HEALTHCARE INFORMATION SYSTEMS**

This course is an introduction to the fundamentals of health information management using computer-based patient records. Key areas of study within health information management are addressed, with emphasis on the use of information as an asset to the health care provider. Included topics illustrate the importance of planning and setting procedures for proper storage, maintenance, usage, and security of health information records. Prerequisites: HCM 1103

### **HCM 2123 ADVANCED HEALTHCARE BILLING**

This course is designed to provide advanced practice in healthcare billing and can serve as a test prep for the national certification exam for billing professionals (CPB). Prerequisite: HCM 1173

### **HCM 2133-ADVANCED HEALTHCARE CODING**

This course is designed to provide advanced practice in healthcare coding, and can serve as a test prep for the national certification exam for coding professionals (CPC). Prerequisite: HCM 1183

### **HCM 2143 HEALTHCARE STATISTICS**

This course will be an introduction to healthcare statistics designed to explain common statistical computations and their practical uses in health care settings. Students will apply the proper method of statistical analysis relative to the current health care industry, basic math and statistical computations, vital statistics and mortality rates, census and occupancy rates, and more. Prerequisites: HCM 1143, HCM 1163.

### **HCM 2163 HEALTHCARE MANAGEMENT**

An introduction to Healthcare Management, this course focuses on leadership/teamwork, organizational behavior, strategic planning, marketing, information systems, finance, compliance, health disparities and emerging issues in healthcare. Prerequisite: HCM 1103

### **HCM 2173 HEALTHCARE HUMAN RESOURCE MANAGEMENT**

A continuance of HCM 2163, focusing on strategic human resource management including organizational structures, legal issues, competencies and quality standards. Job design, recruitment, training with healthcare relations including retention, performance management will also be covered. Prerequisite: HCM 2163

### **HCM 2193 HEALTHCARE LEADERSHIP**

This course deals with the problems of management of the small working unit (division, department, section, etc.) within a larger healthcare agency. Included items will be unit goals, identification of problems, staffing needs, monitoring of work progress, unit communications and interpersonal relations within the unit. Pre/Corequisites: HCM 1143, HCM 1153, HCM 2103, HCM 2143, HCM 2163

### **HCM 2293 BILLING II: ADVANCED HC BILLING AND CERTIFICATION TEST PREP**

This course is designed to provide advanced practice in healthcare billing and may serve as a test prep for a national certification exam for medical billing. Prerequisite: HCM 1173

### **HCM 2233 INTERNSHIP (PRACTICUM)**

Field experience providing learning through observation and participation in administrative activities, which allows the application of knowledge and skills learned in coursework. (Placements are arranged in an existing healthcare system/agency to support role development consistent with the student's career goals and work experience.) Prerequisites: HCM 2163, HCM 2173, HCM 1143

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### HISTORY

#### **HIST 1483 U.S. HISTORY TO 1865**

From European background through the Civil War. Satisfies, with POLS 1113, Oklahoma State Regents for Higher Education requirement of six credit hours of U. S. History and American Government before graduation. No credit for students with credit in HIST 1103. Prerequisites: [R] [W]

#### **HIST 1493 U.S. HISTORY SINCE 1865**

Development of the United States, including the growth of industry and its impact on society and foreign affairs. Satisfies with POLS 1113 Oklahoma State Regents for Higher Education requirement of six credit hours of U. S. History and American Government before graduation. No credit for students with prior credit in HIST 1103. Prerequisites: [R] [W]

#### **HIST 2123 AFRICAN AMERICAN HISTORY (S)**

This course is a multi-disciplinary exploration of the major contours of African-American history, literature, and arts. Temporally, it covers the introduction of Africans to America as slaves through the civil rights movement. The class seeks to include contributions to the subject from the areas of history, literature, and the arts. Prerequisites: [R] [W]

#### **HIST 2323 OKLAHOMA HISTORY (S)**

Development of the state of Oklahoma from prehistory to present. Among the material relating to Oklahoma to be covered are the geography and geology, prehistoric cultures, Native American heritage, Civil War, Cimarron Territory, Indian Territory, Oklahoma Territory, statehood, development of political institutions, ethnic diversity, economic development, politics and other aspects contributing to the formation of the state. The course satisfies the Oklahoma State Department of Education requirement for teacher certification. Prerequisites: [R] [W]

#### **HIST 2450 (1-6) SPECIAL TOPICS (S)**

One to six credits, six credits maximum. Variable course credit of one to six hours. Examines contemporary issues and topics within history. This course may be cross-listed with other technical problems or special topics sections. Prerequisites: [R] [W]

#### **HIST 2463 NATIVE AMERICAN HISTORY (S)**

This course provides a comprehensive examination of the history of North American Native Americans indigenous to what is now the United States. Topics such as languages, religious beliefs, family structures, political structures, economic systems, and military history will be covered. Prerequisites: [R] [W]

#### **HIST 2513 WORLD HISTORY TO 1500 (S)**

An overview of world history from the birth of the first human civilizations to the end of the European Middle Ages. Emphasis is on major political, military, intellectual, and religious events and movements that have shaped world history. Prerequisites: [R] [W]

#### **HIST 2533 WORLD HISTORY SINCE 1500 (S)**

An overview of world history from the end of the European Middle Ages to the modern era. Emphasis is on major political, military, intellectual, and religious events and movements that have shaped world history. Prerequisites: [R] [W]

### HORTICULTURE TECHNOLOGY

#### **HRT 1014 PRINCIPLES OF HORTICULTURE (L, N)**

Horticulture fundamentals course covering the characteristics of and uses for horticultural plants, plant growth principles and plant care practices, the scope of the horticulture industry, basics in plant propagation, landscape plant maintenance, and other horticultural topics. Lab: two hours per week. Prerequisite: [R]

#### **HRT 1123 HOME GARDENING - FRUITS AND VEGETABLES**

Emphasis is placed on fruits and vegetables to be grown in a home garden. Cultural and environmental problems associated with each fruit or vegetable crop to be studied. Lab: 2 hours per week. Prerequisites: [R], ICRW 0035

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **HRT 1151 INTRODUCTION TO FLORAL DESIGN**

Students will experience care and handling of fresh flowers and plants; customer care and sales; and principles and elements of basic flower design. Lab: 1 hour per week.

### **HRT 1173 MARKET GARDENING**

This course will address various horticultural crops including vegetables, fruits and ornamentals. Cultural practices including soil building, fertilization, pest management, harvest and post-harvest handling will be addressed. This course will also cover season extension structures, and equipment needs. Lab: 2 hours per week. Pre/Corequisite: HRT 1014

### **HRT 1202 HORTICULTURE CALCULATIONS**

An introduction to the commonly used calculations in the horticulture industry. Prerequisite: HRT 1014

### **HRT 1320 (1-6) TECHNICAL PROBLEMS - HORTICULTURE**

One to three credits, six credits maximum. Technical problems in horticulture that are of particular interest to horticulture majors. Prerequisite: Advisor Approval

### **HRT 1853 IRRIGATION INSTALLATION AND TROUBLESHOOTING**

This hands-on course introduces basic irrigation layout, installation, maintenance and troubleshooting techniques. Topics include: gluing and repairing PVC and polyethylene pipe, installing and adjusting heads, valve operation, troubleshooting and repairing valves and field controllers. Additional topics include pump and well operations, cross connection, winterizing, drainage and micro irrigation system installations. Lab: 2 hours per week.

### **HRT 2013 LANDSCAPE MANAGEMENT**

An overview of landscape management practices. Topics include inventory and analysis of properties, safety, landscape calculations, and landscape plants establishment. Basic landscape design will be covered. Lab: 2 hours per week. Prerequisites: HRT 1014 and (HRT 2313 or HRT 2413 or HRT 2453)

### **HRT 2023 HORTICULTURAL SOIL SCIENCE**

The study of principle physical, chemical and biological properties of the soil as related to horticultural plant growth. Subjects covered include soil testing and fertilizer usage, formation, soil fertility concepts, and classification of soils. Course work covers the basic chemistry and math related to soil science. Prerequisite: [R]

### **HRT 2050 (1-6) ADVANCED PROBLEMS-HORTICULTURE**

One to six credits, six credits maximum. A study of applied problems that are of particular interest to horticulture majors. Lab Included. Prerequisite: Advisor Approval

### **HRT 2113 TURFGRASS MANAGEMENT**

Selection, establishment and maintenance of turfgrass. Topics include turfgrass equipment, identification of weeds, and fertilizers and chemicals used for turf management. Lab: 2 hours per week. Prerequisite: HRT 1014

### **HRT 2133 NURSERY MANAGEMENT AND OPERATIONS**

The propagation, production, management and marketing of commercial nursery stock including facilities, equipment, supplies, environmental and pest control. Lab: 2 hours per week. Prerequisite: HRT 1014

### **HRT 2153 ADVANCED FLORAL DESIGN**

Students will get in-depth, hands-on experience and coaching on contemporary and everyday design, sympathy, hand-tied bouquets, wedding and event design, and flowers to wear and carry. Principles of selling, pricing and budgeting learned in the introductory class will be used in this course for event planning. Advanced skill development will be encouraged. Lab: 3 hours per week. Pre/Corequisite: HRT 1151

### **HRT 2163 PLANT PROPAGATION**

Principles and practices used in the sexual and asexual propagation of horticultural plants including seeds, division, layering, cuttings, grafting, and budding. Lab: 2 hours per week. Prerequisite: HRT 1014

### **HRT 2213 HORTICULTURE MARKETING**

An in-depth study of marketing principles and how marketing applies to the horticulture industry. Includes location, facilities, sales methods and price determination. Services, merchandising, marketing and advertising techniques, as well as supervisory and personnel responsibilities are also offered. Pre/Corequisite: HRT 1014

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **HRT 2251 STYLES AND TRENDS IN FLORAL DESIGN**

Students will experience advanced design techniques to include tropical flower design and foliage weaving. Public speaking and presentation of completed floral design is incorporated into the course. Lab: 1 hour per week.

Pre/Corequisite: HRT 2153

### **HRT 2263 HORTICULTURAL PEST MANAGEMENT**

Introduces and thoroughly covers the topic of pest management in all areas of horticulture technology. Lab: 2 hours per week. Prerequisite: HRT 1014

### **HRT 2313 DECIDUOUS LANDSCAPE PLANTS**

Identification and classification of deciduous trees, shrubs, vines and groundcovers. Includes the study of the plant materials cultural requirements and landscape uses. Lab: 2 hours per week. Prerequisite: HRT 1014

### **HRT 2343 CONTROLLED ENVIRONMENTS HORTICULTURE**

This is a study of the operation and management of greenhouses and related environments. Emphasis is on infrastructure, cultural systems, production, and marketing of commercial floriculture, vegetable, and herb crops. Lab: 2 hours per week.

Prerequisite: HRT 1014

### **HRT 2413 EVERGREEN LANDSCAPE PLANTS**

The identification and classification of evergreen trees, shrubs, vines and groundcovers. Includes the study of their cultural requirements and landscape uses. Lab: 2 hours per week. Prerequisite: HRT 1014

### **HRT 2453 HERBACEOUS ORNAMENTAL PLANTS**

This plant identification course introduces ornamental annual and herbaceous flowering perennials for garden, landscape and patio spaces. The study includes flowering bulbs, roses, ornamental grasses and herbs. Culture, care and design issues are considered. Lab: 2 hours per week. Prerequisite: HRT 1014

### **HRT 2463 INTERIOR PLANTS**

This plant identification course introduces tropical foliage and flowering plants for interior spaces. Cultural requirements, practical maintenance and design issues are considered, along with an introduction to the interiorscape industry. Lab: 2 hours per week. Prerequisite: HRT 1014

### **HRT 2533 ADVANCED TURFGRASS MANAGEMENT**

Emphasis will be placed on the appropriate maintenance activities for commercial lawn care, sports facilities and golf courses. Advanced topics in turfgrass ecology, turf cultural requirements, pest control, equipment, and commonly used turfgrass calculations will be studied. Prerequisite: HRT 2113

### **HRT 2650 (1-4) HORTICUTLURE INTERNSHIP**

One to four hours credit, six credits maximum. Special project will be assigned by the instructor with the approval of the department head. A comprehensive written report of the work accomplished must be prepared and approved. Before credit is received, an examination may also be required. Prerequisite: Department Head Approval

### **HRT 2663 HORTICUTLURE MANAGEMENT**

An introduction to supervisory and management in the horticulture industry. Topics include employee management, and basic functions of operating a business in the horticulture industry. Prerequisite: Department Head Approval

### **HRT 2933 HORTICULTURE CAPSTONE**

The capstone course of the horticulture programs. The student will demonstrate the collected knowledge, skills and techniques acquired in the program courses by working through an approved project in a team setting. Students will demonstrate problem solving, critical thinking, research techniques, technical writing, budgeting/cost estimating and teamwork in an interdisciplinary setting. Credibility, professionalism and group dynamics will be emphasized to help round out the student's education. The final project must be presented as a group with each individual supplying the necessary resume, portfolio and video introduction. Prerequisites: Sophomore and Advisor Approval

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### HUMANITIES

#### **HUMN 1803 INTRODUCTION TO ART (H)**

An introduction to the analysis and interpretation of visual arts. Visual, emotional, and intellectual aspects of art in painting, sculpture, printmaking, and architecture. Same course as ART 1803

#### **HUMN 2050 (1-6) SEMINAR IN HUMANITIES (H)**

A study of variable topics in Humanities. May be repeated with different topics. Prerequisite: ENGL 1113

#### **HUMN 2103 MASTERWORKS OF WESTERN CULTURE/ANCIENT AND MEDIEVAL (H)**

Key ideas and values of ancient and medieval western culture, as discovered through an integrated and thematic study of literature and the fine arts, seen in their historical and philosophical context. Prerequisite: ENGL 1113

#### **HUMN 2203 MASTERWORKS OF WESTERN CULTURE/MODERN (H)**

Key ideas and values of modern western cultures, as discovered through an integrated and thematic study of literature and the fine arts, seen in their historical and philosophical contexts. Prerequisite: ENGL 1113

#### **HUMN 2733 WORLD RELIGIONS (H)**

Major world religions, such as Hinduism, Buddhism, Judaism, Christianity, and Islam with a view to understanding the general nature of religion and its various dimensions. Prerequisite: ENGL 1113

### INFORMATION TECHNOLOGY

#### **ITD 1103 INFORMATION TECHNOLOGY FUNDAMENTALS**

The course provides students with the foundation-level knowledge and skills necessary for information technology technical support positions. Students will be able to identify and explain Personal Computer (PC) components, setup a basic PC workstation, conduct basic software installation, identify compatibility issues and recognize/prevent basic security risks. Further, this course covers the areas of Green IT and preventative maintenance of computers. The course prepares the student for an Information Technology industry recognized certification exam. Prerequisite: [R]

#### **\*ITD 1113 MICROSOFT WINDOWS EXPERT USER**

This course provides the student with the knowledge and skills necessary to provide technical support with the current Microsoft desktop operating system. Students will develop an advanced proficiency in using the Windows desktop operating system, as such; students will need prior knowledge and skills with Windows desktop operating systems. The student will understand the operating system configurations, installing and upgrading client systems, managing applications, managing files and folders, managing devices, and operating system maintenance. In addition, other course topics include configuring network connectivity, access to resources, mobile computing, monitoring and maintaining systems that run Windows, and backup and recovery options. This course prepares the student for an Information Technology industry recognized exam. Prerequisite: [R]

#### **ITD 1523 SUPPORTING AND TROUBLESHOOTING PERSONAL COMPUTERS**

The course presents the fundamentals of personal computer hardware and software installation, maintenance, networking and troubleshooting. It assists students in preparing for the CompTIA A+ industry certification. This course uses a combination of lecture and hands-on lab exercises. Lab: 2 hours per week. Prerequisite: ITD 1103

#### **ITD 1533 LAN FUNDAMENTALS**

The course provides the student with the foundation-level knowledge of and skills with computer networking. In this course, the student will examine network concepts, standards, technology, media, protocols and topologies. Topics include connectivity, network devices, basic network security, local and wide area networks, network design, transmission media, cabling, wireless access, IP addressing, and open systems interface (OSI) model. Prerequisite: [R]

#### **ITD 1543 INTRODUCTION TO COMPUTER FORENSICS**

This course introduces students to the fundamentals of the computer forensics field and technology. Students will learn about the computer forensics profession, legal issues and procedures of computer investigations and digital evidence

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

management, industry-standard computer forensic tools, file systems, data recovery and collection, and sample case evaluations. Prerequisite: [R]

### **ITD 1613 AWS ACADEMY CLOUD FOUNDATIONS**

The course provides the student with an overall understanding of cloud computing concepts, independent of specific technical roles. It provides a detailed overview of cloud concepts, core services, security, architecture, pricing and support. Prerequisite: [R]

### **ITD 2143 DIGITAL INVESTIGATIONS AND REPORTING**

This course covers the digital forensics methods used to preserve, collect, validate, identify, analyze, interpret, and present digital evidence for a criminal case or civil litigation. Each step in digital forensics and eDiscovery process emphasizes the legal requirements that digital evidence have integrity, authenticity, reproducibility, non-interference, and minimization. Lab: 2 hours per week. Prerequisite: ITD 1543

### **ITD 2163: CYBER ETHICS AND LAW**

This course introduces students to US Federal laws and regulations related to computers and technology. Students will also examine impacts of issues in the use of computer technology in organizational environments and be introduced to professional codes of ethics and standards within the technology professions. Prerequisites: [R] [W]

### **ITD 2173: COMPUTER FORENSICS & INCIDENT RESPONSE**

Presents the ethical and social issues related to computer technology. This course provides students the opportunities to apply the fundamentals of the computer, forensics to the processing and analysis of real or hypothetical cases. Students will have substantial hands-on experience in problem-solving and in using computer forensic knowledge and tools to identify, recover, collect, process, analyze, document and present digital evidence in sample cases of computer crimes or incidents. The hands-on experience includes work on file and data recovery, password cracking and examination and analysis of email and network intrusions. Lab: 2 hours per week. Prerequisite: ITD 2143; Corequisite: ITD 2801

### **ITD 2193 TECHNICAL SUPPORT COMMUNICATIONS**

This course provides students with the skills to provide technical support to users, including troubleshooting and problem solving, successful communication with users, determining a client's specific needs, and training end users. With a balance of both people skills and technical skills this course is an excellent resource for students who are preparing for careers in technical occupations. Includes but not limited to effective presentations (oral and written), as well as summarizing to co-workers reasoning and communication. Role-playing with current IT issues and using industry professionals to play out the scenario. Focus on using soft-skills for effective communication and delivery of topic. Prerequisites: [R] [W]

### **\*ITD 2213 NETWORKING I**

This course prepares the student for positions as desktop support technicians who manage and maintain desktop operating systems as part of their technical responsibility. The course provides the student with the knowledge and skills necessary to manage and maintain the desktop operating system on a network. The student will be able to identify cause of and resolve desktop application issues, networking issues, manage and maintain systems running windows client, support mobile users, and identify cause of and resolve security issues. After completing the course, the student should be able to resolve operating systems issues by telephone, email, connecting to an end user's system remotely, or by visiting an end user's desktop. The student should have prior experience using Microsoft office applications and other productivity applications used in a corporate environment. This course prepares the student for an Information Technology industry certification exam. Prerequisite: ITD 1533

### **\*ITD 2240 (1-4) COOPERATIVE PRACTICE**

One to four credits. Under supervision of the college and the employer, students combine classroom learning with career-related work experience. Prerequisite: Department Head Approval

### **\*ITD 2313 NETWORKING II**

This course prepares the student for positions as desktop support technicians who manage and maintain desktop operating systems as part of their technical responsibility. The course provides the student with the knowledge and skills necessary to manage and maintain the desktop operating system on a network. The student will be able to identify cause of and resolve desktop application issues, networking issues, manage and maintain systems running windows client, support mobile users, and identify cause of and resolve security issues. After completing the course, the student should be able to resolve operating systems issues by telephone, email, connecting to an end user's system remotely, or by

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

visiting an end user's desktop. The student should have prior experience using Microsoft office applications and other productivity applications used in a corporate environment. This course prepares the student for an Information Technology industry certification exam. Lab: 2 hours per week. Prerequisite: ITD 1533

### **\*ITD 2333 NETWORKING III**

This course prepares the student for positions as desktop support technicians who manage and maintain desktop operating systems as part of their technical responsibility. The course provides the student with the knowledge and skills necessary to manage and maintain the desktop operating system on a network. The student will be able to identify cause of and resolve desktop application issues, networking issues, manage and maintain systems running windows client, support mobile users, and identify cause of and resolve security issues. After completing the course, the student should be able to resolve operating systems issues by telephone, email, connecting to an end user's system remotely, or by visiting an end user's desktop. The student should have prior experience using Microsoft office applications and other productivity applications used in a corporate environment. This course prepares the student for an Information Technology industry certification exam. Lab: 2 hours per week. Prerequisite: ITD 1533

### **\*ITD 2433 LINUX**

This course is a study of the Linux operating system and applications for system, file and disk management. It includes an introduction to systems administration and development of programs for the Linux operating system. Lab: 2 hours per week.

### **ITD 2513 AWS ACADEMY CLOUD COMPUTING ARCHITECTURE**

The course is designed to help students develop technical expertise in cloud computing and prepare them for an Information Technology industry recognized certification exam. Prerequisite: ITD 1613

### **\*ITD 2623 ADVANCED LAN FUNDAMENTALS**

The course provides the student with the knowledge and skills to implement a defined network architecture with basic network security. The student will be able to configure, maintain, and troubleshoot network devices using appropriate network tools and understand the features and purposes of network technologies. The students will learn to make basic solution recommendations, analyze network traffic, and be familiar with common protocols and media types. Course prepares the student to take the CompTIA Network + certification exam. Prerequisite: ITD 1533

### **\*ITD 2723 NETWORK SECURITY**

The course prepares the student with foundation-level network security skills and knowledge used by IT security professionals. The course provides the student with the knowledge and skills necessary to identify risk and participate in risk mitigation activities, provide infrastructure, application, operational and information security, apply security controls to maintain confidentiality, integrity and availability, identify appropriate technologies and products, and operate with an awareness of applicable policies, laws and regulations. The course covers network security; compliance and operational security; threats and vulnerabilities; application, data and host security; access control and identity management; and, Cryptography. This course prepares the student for an Information Technology industry recognized certification exam. Prerequisite: ITD 2623

### **ITD 2801 CERTIFICATION PRACTICUM**

This course gives the student the opportunity to demonstrate the knowledge and skills learned from the computer forensics and e-discovery certificate course work. The practicum will include a written exam and a practical exam. The student will demonstrate comprehensive knowledge of high level proficiency in order to complete the course. Lab: 2 hours per week. Prerequisite: ITD 2143; Corequisite: ITD 2173

## INITIAL COLLEGE STUDIES

### **ICRW 0035 COLLEGE READING AND WRITING I**

This course introduces the critical reading and writing skills students need to comprehend and interact with college-level texts and to produce original college-level writing through the process of generating ideas, drafting, organizing, revising, and editing.

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **ICRW 0122 SUPPORT FOR COMPOSITION I**

Co-requisite course to be taken in conjunction with ENGL 1113. This course will provide supplemental and support instruction in the critical reading and writing skills students need to be successful in Composition I. Prerequisite: Grade of "B" or better in ICRW 0035 or satisfactory placement scores.

### **ICRW 0123 COLLEGE READING AND WRITING II**

This course integrates the critical reading and writing skills students need to comprehend and interact with college-level texts and to produce original college-level writing through the process of generating ideas, drafting, organizing, revising, and editing. Prerequisite: ICRW 0035 or satisfactory placement scores.

### **ICS 1101 STUDY SKILLS**

This course will provide students an opportunity to explore and practice skills necessary for success in college. Students will learn how to manage time, keep up with assignments, take notes effectively and efficiently, work with textbooks, master complex material, structure review sessions and address different learning styles.

### **ICS 1163 STUDENT SUCCESS STRATEGIES**

This course is designed to increase student success by increasing retention and academic success. Its focus is on improving critical thinking skills, learning strategies, computer literacy, healthy life-style-skills and student knowledge of available resources both on and off campus.

### **ICSM 0113 INTRO TO COLLEGE MATH**

This course provides an introduction and review of a variety of mathematical topics needed to prepare students for college-level Quantitative Reasoning, Business Math, or Fundamentals of Statistics. Topics for this course include a review of arithmetic operations and numerical reasoning, applications of ratio, rate, proportion, and percentage, introduction to basic statistical concepts, geometry, and personal finance. This course will also cover the basic algebraic manipulation of linear equations and formulas with a primer on graphing and an introduction to linear regression.

### **ICSM 0233 ALGEBRAIC LITERACY**

Review of fundamental mathematics and introduction to algebra to include signed numbers, exponents, algebraic expressions and fractions, linear equations and inequalities, polynomials, factoring, and the basics of rational expressions and equations. This course also covers radicals and radical equations, complex numbers, systems of linear equations, quadratic equations, and the graphing of lines, systems of equations, and quadratic equations. Prerequisite: ICSM 0113 or satisfactory placement scores.

### **ICSM 0412 PREP FOR QUANTITATIVE REASONING**

Co-requisite course to be taken in conjunction with Math 1413. This course will provide supplemental and support instruction on math skills used in various mathematical topics ranging from personal finance, measurement, geometry, statistics, counting methods and probability theory.

### **ICSM 0482 PREP FOR MATHEMATICAL MODELING**

Co-requisite course to be taken in conjunction with Math 1483. This course will provide supplemental instruction and review of the basics of algebraic equations and functions to include their various uses in the modeling and interpretation of real-world data.

### **ICSM 0512 PREP FOR PRECALCULUS**

Co-requisite course to be taken in conjunction with Math 1513. This course will provide supplemental and support instruction on the algebraic skills need to be successful in the Math 1513. Topics include radicals and radical equations, complex numbers, systems of linear equations, quadratic equations, and the graphing of lines, systems of equations, and quadratic equations.



# Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

## INTERPRETER TRAINING

### **ITP 1213 VISUAL GESTURAL COMMUNICATION**

An introduction to the nuances of nonverbal communication. Emphasis is placed on visual gestural communication (e.g. facial expressions, body language, gestures, pantomime) in general communication as well as its role and use in American Sign Language. Prerequisite: ITP 1363

### **ITP 1222 INTRODUCTION TO INTERPRETING**

An introduction to the profession of sign language interpreting which includes an overview of the history of interpreting and interpreting organizations, the roles and responsibilities of the interpreter, and overview of various work venues, and a set of skills required to express communication without the spoken word through the use of facial expression, body language and hand gestures. Prerequisites: [R] [W]

### **ITP 1320 (1-4) TECHNICAL PROBLEMS-ITP**

One to four credits. Technical problems in interpreter training that are of particular interest to interpreters.

### **ITP 1332 INTRODUCTION TO THE DEAF COMMUNITY**

A study of the status of deaf persons from the past to the present day. Various communication methods and the education process for deaf students will be discussed. Prerequisites: [R] [W]

### **ITP 1352 FINGERSPELLING I**

A course focused on developing the skill of reading and executing fingerspelling with emphasis on fluency and accuracy. Prerequisite: ITP 1364

### **ITP 1364 AMERICAN SIGN LANGUAGE I**

An introductory course in American Sign Language (ASL) which includes the development of receptive and expressive skills in authentic situations and an introduction to Deaf culture. Topics revolve around sharing information about our environment and us. Grammar is introduced in context, with an emphasis on developing question and answering skills. Activities involving interaction allow for rehearsing conversational strategies and targeted vocabulary. Prerequisites: [R] [W]

### **ITP 1373 AMERICAN SIGN LANGUAGE II**

Continuation of American Sign Language I (ASL) 1. This course further develops receptive and expressive skills in American Sign Language in authentic situations and expands the study of Deaf culture. It covers topics like making requests and talking about routines while focusing on grammatically correct production and appropriate non-manual behaviors. Prerequisites: ITP 1363

### **ITP 1493 INTERPRETING SPECIAL AREAS**

Introduces the following topics in interpreting: (1) working with deaf and hard-of-hearing persons who communicate through speech and speech reading, (2) working with person having minimal language skills, (3) working with person who are deaf and blind, and (4) multicultural aspects of interpreting. Prerequisite: ITP 1373

### **ITP 2050 (1-6) ADVANCED TECHNICAL PROBLEMS**

One to six credits, six maximum. A study of applied problems that are of special interest to the interpreter. Prerequisite: Department Head Approval

### **ITP 2113 SIGN-TO-ENGLISH INTERPRETING I**

Designed to develop skills in consecutive interpreting from sign into spoken English. Skills targeted include cultural mediation, transitions, closure, fluency, clarity and message conveyed for content and affect. Prerequisites: ITP 2413, ITP 2313

### **ITP 2263 EDUCATIONAL INTERPRETING**

Designed to give the students experience in interpreting in the educational setting. Emphasis will be given to Signing Exact English (SEE) and the vocabularies specific to different educational areas such as history, math, computer science, English and science. Prerequisites: ITP 2513, ITP 2623

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **ITP 2273 TRANSLITERATING**

Designed to provide students with skills development in transliterating using conceptually accurate signed English. Students will work on a variety of stimulus materials to expand vocabulary. Prerequisite: ITP 2513, ITP 2623

### **ITP 2313 FUNDAMENTALS OF INTERPRETING**

An introduction to the principles, practices and processes of interpreting and transliterating. Emphasis on the Code of Professional Conduct and ethical decision-making. Prerequisite: ITP 1373, ITP 1223

### **ITP 2322 ETHICAL DECISION MAKING IN INTERPRETING**

This course will focus on the ethical dilemmas interpreters encounter in various interpreting situations. We will discuss how to become aware of our own personal values, morals, and prejudices as well as how they can influence the interpreting situation. This course prepares students for the QAST written examination. Prerequisite: ITP 2313

### **ITP 2413 AMERICAN SIGN LANGUAGE III**

An intermediate course with an emphasis on expression and receptive conversational sign language skills incorporating signed expression. Prerequisite: ITP 1373

### **ITP 2443 SIGN-TO-ENGLISH INTERPRETING II**

A continuation of Sign-to-English Interpreting I. Targeted skills will also include interpreting simultaneously from sign to spoken English and recognition of a variety of signing modes. Prerequisites: ITP 2113, ITP 2513

### **ITP 2501 SKILLS MAINTENANCE LAB**

Skills maintenance lab.

### **ITP 2513 AMERICAN SIGN LANGUAGE IV**

Extensive concentration on American Sign Language communication skills, combined with linguistic comparisons of English and ASL. Prerequisite: ITP 2413

### **ITP 2522 AMERICAN SIGN LANGUAGE V**

Continuation of American Sign Language (ASL) IV. This course further develops receptive and expressive ASL skills in authentic situations and expands the study of Deaf culture. There will be extensive concentration on American Sign Language grammar and communication skills, combined with linguistic comparisons of English and ASL. Prerequisite: ITP 2513

### **ITP 2623 INTERPRETING ENGLISH TO ASL I**

A continuation of Sign to English Interpreting I. Targeted skills will also include interpreting simultaneously from sign to spoken English and recognition of a variety of signing modes. Prerequisites: ITP 2313, ITP 2413, ENGL 1213

### **ITP 2633 INTERPRETING ENGLISH TO ASL II**

A continuation of Interpreting English to ASL I. Skills targeted also include interpreting simultaneously. Students will prepare for the state Quality Assurance Screening Test (QAST) Prerequisites: ITP 2623, ITP 2113

### **ITP 2642 INTERPRETING PRACTICUM I**

This course is designed to give the student practical, real world experience in the field of interpreting. Students will observe and interact with working interpreters in the field in a variety of settings. Students will apply aspects of what they learn in the field to various interpreting lab assignments. Pre/Corequisite: ITP 2633

### **ITP 2654 INTERPRETING PRACTICUM II**

A practicum course designed to give students supervised experiences in interpreting in limited professional settings. Students will prepare a portfolio of their best work in interpreting and transliterating in both voice-to-sign and sign-to-voice. Students will take the QAST performance evaluation at the end of the semester. Prerequisite: ITP 2642

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### MANAGEMENT

#### **MGMT 1293 INTRODUCTION TO NONPROFIT ORGANIZATIONS**

An overview of nonprofit organizations and the importance of business functions in their effectiveness and sustainability. Examines historical background, development, role, auspices, organization and purposes of nonprofit agencies. Special emphasis is placed on structure, program organizational management, planning and stewardship, fundraising, community building, volunteer services and problems which confront these organizations. Prerequisite: [R]

#### **MGMT 2003 SMALL BUSINESS MANAGEMENT**

Focuses on the experiences and problems faced by those who go into business for themselves. Looks at problems of organizing and managing individually owned businesses including location, securing capital, records, personnel and sales promotion. Prerequisites: [R] [W]

#### **MGMT 2103 PRINCIPLES OF MANAGEMENT**

An introductory course presenting the basic concepts and practices of management, both private and public. Topics include historical development of management; basic definitions and philosophy; fundamentals managerial functions, including planning, organizing, staffing, directing and controlling; current trends in management; possible future developments in organization and administration. Prerequisite: [R] [W]

#### **MGMT 2143 ORGANIZATIONAL LEADERSHIP**

A study of the impact of leadership on organizational performance. Course discusses organizational structure, leadership roles, motives, behaviors, attitudes, and styles, leadership theories, tactics for organizational change, conflict resolution, and strategic leadership. Prerequisites: [R] [W]

#### **MGMT 2163 SUPPLY CHAIN MANAGEMENT**

Focuses on understanding the relevant history, principles, and major elements of supply chain management. Specific topics include sourcing and purchasing management; managing supplier relationships; demand forecasting, inventory management, quality management. domestic and international transportation, customer relationship management, enterprise resource planning systems, facility location decision-making, performance management, and future challenges facing supply chain managers. Prerequisites: [R] [W]

#### **MGMT 2213 HUMAN RESOURCES MANAGEMENT**

Focuses on developing students' understanding of human resource issues and the practical application of methods for solving these issues. Topics covered include job analysis, recruitment, interviewing, selection, performance appraisal, training, compensation and equal employment opportunity. Issues are reviewed within the context of the historical and current social environment, labor market, legal and global economic conditions influencing practice. Prerequisites: [R] [W]

#### **MGMT 2493 NONPROFIT MANAGEMENT**

Immersion of the student in nonprofit administration. The theoretical and the practical side of nonprofit management from establishment of a nonprofit organization through the operations of the programs. The primary goal for the course is to increase the knowledge and expertise of students in order for them to feel comfortable in the operation of a nonprofit organization. Prerequisites: [R] [W]

#### **MGMT 2593 FUNDRAISING AND DEVELOPMENT**

Theory and practice of philanthropy, resource acquisition methods through ethical fundraising and earned income approaches for nonprofit organizations. Examines methods and techniques in fundraising for nonprofit agencies. Explores relationships with umbrella organizations, government funding, grants, budget control and account-ability. Prerequisites: [R] [W]

#### **MGMT 2663 PROJECT MANAGEMENT**

This course examines project management roles and environments, the project life cycle and various techniques of work planning, control and evaluation, and the tools used to achieve project objectives. Prerequisites: ACCT 2103, MGMT 2103, MKT 2273

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### MARKETING

#### **\*MKT 1523 DIGITAL AND SOCIAL MEDIA MARKETING**

Understanding social media and its impact on business marketing efforts is vital in today's world. This course explores opportunities that working with social media platforms offer and investigates how to leverage these platforms and tools to better improve communication, customer relations, and sales. Course also examines the power of analytics and other methods of digital marketing. Prerequisite: [R]

#### **MKT 2273 PRINCIPLES OF MARKETING**

Focuses on the relationship between the organization and its customers and the other members of the channel of distribution. Introduces students to the marketing function of an organization, the environmental factors influencing marketing decisions, the discovery of market opportunities, the development of marketing strategy and the development of marketing programs. Prerequisites: [R] [W]

#### **MKT 2353 SERVICES MARKETING AND MANAGEMENT**

This course focuses on the distinctive characteristics of services and how they impact the organization's success. To understand effective services marketing and delivery, this course will utilize the management concepts of organizational structures, management styles, and management competencies on service management decision making and implementation to develop strong customer relationships and support broader marketing decisions. Prerequisite: MKT 2273

#### **MKT 2363 PERSONAL SELLING AND SALES MANAGEMENT**

The study of the role of personal selling in the marketing mix, application of the step-by-step selling process, and an introduction to topics and issues related to the management of a sales force. Prerequisite: MKT 2273

#### **MKT 2373 RETAIL MANAGEMENT**

A study of the field of retailing, the role of retailing in the distribution process and the contemporary challenges and opportunities in the field. Focuses on the key issues in developing and implementing a retail strategy with an emphasis on financial considerations and implementation through merchandise and store management. Prerequisite: MKT 2273

#### **MKT 2643 PRINCIPLES OF PUBLIC RELATIONS**

A study of various methods and procedures for use by individuals, groups or organizations to improve their image, communications and relationships with their public. Builds on a rigorous base of consumer psychology and then focuses on public relations and communication in relation to the overall promotional mix. Prerequisite: MKT 2273

#### **MKT 2750 (1-3) SELECTED TOPICS IN MARKETING**

The study and/or analysis of a selected topic in Marketing. May be repeated with a different topic. Prerequisite: MKT 2273

### MATHEMATICS

#### **MATH 1413 QUANTITATIVE REASONING (A)**

This course explores various topics designed to build an appreciation of mathematics and to expose students to mathematical problems within numerous disciplines. Specifically, the course will address some personal finance, geometry and measurements, probability problems and introduce fundamentals of statistics. Prerequisite: ICSM 0113

#### **MATH 1483 MATHEMATICAL FUNCTIONS AND THEIR USES (A)**

This course features the study of equations and functions (linear, polynomial, rational, exponential, logarithmic) from various perspectives (symbolic, verbal, numerical, graphical). Digital techniques are used for graphing functions, solving equations, and modeling data through regression methods. Prerequisite: [M]

#### **MATH 1513 PRECALCULUS I (A)**

This course is a study of equations and functions (polynomial, rational, radical, exponential, logarithmic: and systems of equations. This course serves as a prerequisite for Math 2123 or Math 2145. Prerequisite: [M]

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **MATH 1583 APPLIED GEOMETRY AND TRIGONOMETRY (A)**

Geometry, trigonometry, and their applications to technology and design. Not intended for calculus-bound students. Prerequisite: MATH 1513

### **MATH 1613 PRECALCULUS II (A)**

This course addresses trigonometric functions, solutions of right and oblique triangles, and applications of engineering. Prerequisite: MATH 1513 or Math Department Head Approval

### **MATH 2103 BUSINESS CALCULUS (A)**

Introduction to differential and integral calculus. For students of business and social sciences. Prerequisite: MATH 1483

### **MATH 2123 CALCULUS FOR TECHNOLOGY PROGRAMS I (A)**

First part of a terminal sequence in calculus for students pursuing degrees that emphasize technology. Functions and graphs, differentiation and integration with application. Prerequisite: MATH 1613

### **MATH 2133 CALCULUS FOR TECHNOLOGY PROGRAMS II (A)**

The second part of a terminal sequence in calculus for students pursuing degrees that emphasize technology. Calculus of trigonometric, exponential and logarithmic functions with application to physical problems. Prerequisite: MATH 2123

### **MATH 2145 CALCULUS I (A)**

Introduction to derivatives, integrals and their applications, including introductory analytic geometry. Prerequisite: MATH 1613

### **MATH 2155 CALCULUS II (A)**

A continuation of MATH 2145, including multivariate calculus and series with applications. Prerequisite: MATH 2145

### **MATH 2233 DIFFERENTIAL EQUATIONS (A)**

Methods of solution of ordinary differential equations with applications. First order equations, linear equations of high order, series solutions, Laplace Transform theory. Prerequisite: MATH 2155

## METEOROLOGY

### **METR 1013 ELEMENTARY METEOROLOGY**

Meteorology is the study of the earth's atmosphere. The course will foster a basic understanding of the atmospheric environment by studying clouds, precipitation, winds, air masses and storms. Prerequisites: [R], ICSM 0113

## MICROBIOLOGY

### **MCRO 2124 INTRODUCTION TO MICROBIOLOGY**

Introductory study of general principles of microbiology. Emphasis will be placed on current technologies and world events related to the cultivation, identification, and diseases associated with microbes. Previous biological science knowledge is advised. Lab: three hours per week. Prerequisite: CHEM 1154 or CHEM 1315

## MUNICIPAL FIRE PROTECTION

### **MFP 1103 INTRODUCTION TO PUBLIC FIRE PROTECTION**

The student will acquire an understanding of the fundamentals behind the methods, efforts and equipment available to protect the public from fire.

### **MFP 1123 FIRE TACTICS II**

A study of principles and methods with the fire ground tactics and strategy of the multi-company officer or chief officer. The course emphasizes multi-company alarm handling disasters and major fire incidents of mutual aid and large-scale

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

command. Includes principles of command, control and techniques required at the scene of an emergency. Prerequisite: MFP 1113

### **MFP 1253 HAZARDOUS MATERIALS FOR FIRST RESPONDERS**

This course is designed to provide the first responders to a hazardous materials incident with the basic information they need to make the first impact on the incident a professional and positive one.

### **MFP 1320 (1-4) TECHNICAL PROBLEMS - MUNICIPAL FIRE PROTECTION**

One to four, maximum six credits. Technical problems in fire protection that are of particular interest to the fire service technician.

### **MFP 1727 FIREFIGHTER I**

Prepares students to the level of Firefighter I as defined by NFPA (National Fire Protection Association) 1001 Standard for Fire Fighter Professional Qualifications. Students completing the course with a grade of "C" or better will be eligible for certification by the International Fire Service Accreditation Congress (IFSAC) and Oklahoma Fire Service Training (FST) as Firefighter I. Live fire training and certification testing will be conducted by Fire Service Training in Stillwater, Oklahoma. Students must complete and pass Hazardous Materials Operations (MFP 2213) before certification of Firefighter 1 is granted by IFSAC and FST. Lab: three hours per week. Medical release from a physician is required. Prerequisite: MFP 1148

### **MFP 2113 FIRE TACTICS I**

A review and study of basic principles and methods utilizing fire department manpower equipment and apparatus. Emphasis will be on pre-planning, fire ground problems and related fire ground decisions as required of the company officer. Prerequisite: MFP 1727

### **MFP 2163 FIRE ADMINISTRATION**

A study of how to plan and implement long range programs in relation to prevention, training, public relations, suppression and personnel with special emphasis on budget processes and the fire department's relation to overall community service delivers.

### **MFP 2211 EMERGENCY VEHICLE OPERATION**

This course introduces Fire and EMS personnel to Law and Liabilities, preventive maintenance, emergency response considerations, crash and injury prevention and safe driving techniques. Meet NFPA 1002 & 1451 requirements.

### **MFP 2213 HAZMAT OPERATIONS**

Upon successful completion of this course the student will be able to analyze a hazardous materials incident, plan an initial response, implement the response and evaluate the progress of the actions taken. Major topics covered in the course include firefighter safety, regulations and standards, chemistry, recognition and identifications, DOT guidebook, site management, container behavior, defensive control measures, personal protective equipment and decontamination. Methods of instruction include lecture, discussion, classroom exercises, audio/visual material, practical exercises, quizzes, observations, written examination and a final certification examination conducted by FST (Fire Service Training).

### **MFP 2413 CONTEMPORARY ISSUES IN THE FIRE SERVICE**

This course addresses a multitude of issues and trends in municipal fire protection by examining current literature and research. Students will be exposed to readings, guest speakers, and engaging discussion relative to the challenges and opportunities of the fire service. The course content will culminate into a final project that serves as a final degree requirement. Prerequisites: MFP 1103, MFP 2163, MFP 1727

### **MFP 2803 MUNICIPAL FIRE PROTECTION PRACTICUM**

This course provides an opportunity to apply the knowledge and skills of municipal fire protection through participating in cooperative relationships with Oklahoma Metro Fire Departments. Students participate in 12 or 24 hours shifts while completing a skills checklist with an evaluation by the assigned supervisor. Prerequisites: MFP 1148, MFP 2727

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### NURSE SCIENCE

This is a selective admission program. See department for details.

#### **NURS 1102 INTRO TO NURSING**

An introduction to the profession of nursing and to success strategies for current nursing educational processes and practices. Prerequisites / Corequisites: ENGL 1113 ICSM 0113

#### **NURS 1118 FOUNDATION OF NURSING CONCEPTS**

Students will be introduced to the core values of caring, diversity, ethics, excellence, holism, integrity and patient-centeredness; grounded in the nursing process. Focus is on the formation of knowledge, practice and ethical behavior necessary for safe, effective, holistic nursing practice within a technologically rich, dynamic health care environment. Active learning strategies of the course include individual and group learning experiences, simulation and clinical rotations. Prerequisites: CHEM 1154 or CHEM 1315, NSCI 1113, ENGL 1113, PSYC 1113; Corequisites: BIOL 2214, PSYC 2213, NURS 1121

#### **NURS 1121 INTRODUCTION TO PHARMACOLOGY**

Students will be introduced to the major drug classification and dosage calculation. The focus is on knowledge, practice and ethical behaviors necessary for safe and effective administration of medications. Prerequisites: CHEM 1154 or CHEM 1315, NSCI 1113, ENGL 1113, PSYC 1113; Corequisites: BIOL 2214, PSYC 2213, NURS 1118

#### **NURS 1148 NURSING CARE AND CONCEPTS ACROSS THE LIFESPAN**

Students will incorporate the knowledge, practice and ethical behavior necessary for safe, effective, holistic nursing practice within a technologically rich, dynamic healthcare environment. The focus will be on acute care, community-based care, health promotion, and wellness, including care of populations ranging from maternal-child through geriatrics. Active learning strategies of the course will include individual and group learning experiences, simulation and clinical rotations. Prerequisites: BIOL 2214, PSYC 2213, NURS 1121, NURS 1118; Corequisites: PSIO 2314, ENGL 1213

#### **NURS 1314 NURSING CONCEPTS FOR THE CAREER LADDER STUDENT**

In this course, students will incorporate the knowledge, practice, and ethical behavior necessary for safe, effective, holistic nursing practice within a technologically rich, dynamic healthcare environment; based on the core values of caring, diversity, ethics, excellence, holism, integrity and patient-centeredness. The focus will be on the philosophy of registered nursing, nursing process, assessment, communication, roles and functions of associate degree nurses. Active learning strategies of the course include individual and group learning experiences, simulation, and application of basic pharmacology knowledge. Prerequisites: CHEM 1154 or 1315, NSCI 1113, ENGL 1113, PSYC 1113, BIOL 2214, PSYC 2213, previous acceptance into the Nursing Career Ladder Pathway; Pre/Corequisites: PSIO 2314, ENGL 1213

#### **NURS 2050 (1-3) SPECIAL TOPICS IN NURSING**

Directed individual study in specific topics related to nursing. Prerequisite: Department Head Approval

#### **NURS 2218 NURSING CONCEPTS AND CARE FOR VULNERABLE POPULATIONS**

Students will utilize the knowledge, practice and ethical behavior necessary for safe, effective, holistic nursing practice within a technologically rich, dynamic healthcare environment. The focus will be on medical-surgical nursing and community-based care of vulnerable populations, including geriatric, pediatric, disabled populations, and for those with mental health disorders. Active learning strategies of the course include individual and group learning experiences, simulation and clinical rotations. Prerequisites: PSIO 2314, ENGL 1213, NURS 1148; Corequisites: MCRO 2124, POLS 1113

#### **NURS 2258 COMPLEX NURSING CONCEPTS**

Students will apply the knowledge, practice, and ethical behavior necessary for safe, effective, holistic nursing practice to the complexities of care within a technologically rich, dynamic healthcare environment. The focus is on high acuity care and management of multiple clients. Active learning strategies of the course include individual and group learning experiences, management of multiple clients. Active learning strategies of the course include individual and group learning experiences, simulation, and clinical rotations, including immersion. Prerequisites: MCRO 2124, POLS 1113, NURS 2218; Corequisites: HIST 1483 or HIST 1493, NURS 2342

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **NURS 2342 TRANSITION TO PROFESSIONAL PRACTICE**

Students will individualize a personal preparation plan for licensure and successful integration of the program outcomes of human flourishing, nursing judgment, professional identity, and spirit of inquiry. The course will also focus on the students' development of a practice framework including the political/policy process and legislation affecting delivery of care, including relevant healthcare mandates. Prerequisites: MCRO 2124, POLS 1113, NURS 2218; Corequisites: HIST 1483 or HIST 1493, NURS 2258

## **NUTRITION**

### **NSCI 1113 BASIC HUMAN NUTRITION (N)**

Study of the functions of the nutrients in human life processes and the nutrient relationship to health as a basis for food choices. Open to all students.

### **NSCI 1123 HEALTHY LIVING**

This course will explore different aspects health, dimensions of wellness, and basic nutrition information. The course will cover current topics such as supplements, fad diets, and healthy living across the globe. Self-assessments and personal reflections of students' health, wellness, and diet are key components of this course.

## **PHILOSOPHY**

### **PHIL 1013 INTRODUCTION TO PHILOSOPHY (H)**

Basic works by great thinkers, including Plato, Descartes and Hume. Prerequisites: [R] [W]

### **PHIL 1213 INTRODUCTION TO ETHICS (H)**

Introductory ethics and social philosophy. Moral decision-making, the good life, social values, freedom and responsibility. Prerequisites: [R] [W]

### **PHIL 1313 CRITICAL THINKING (H)**

Informal and formal reasoning, explanation, definition and fallacies. Emphasis on the critique, evaluation and development of arguments in everyday discourse. Practical applications. Prerequisites: [R] [W]

### **PHIL 1223 INTRODUCTION TO EASTERN PHILOSOPHY (H)**

This course will examine the primary philosophic questions addressed by each tradition of the major Eastern traditions. The goal of this course is to introduce how these different traditions offer valuable contributions to general philosophical questions. Prerequisite: ENGL 1113

## **PHYSICS**

### **PHYS 1014 DESCRIPTIVE PHYSICS (N)**

A survey course presenting the basic concepts and principles of physics with a minimum of mathematics. Motion, waves, temperature, electricity, magnetism, optic and atomic energy. No credit for students with PHYS 1114. Prerequisites: [R] [M]

### **PHYS 1114 GENERAL PHYSICS I (L, N)**

Physics for the non-engineering major or non-physics major. The course includes topics in mechanics, heat and sound with applications of each. Four hours lab per week. Prerequisites: [R], MATH 1483 or MATH 1513

### **PHYS 1201 GENERAL PHYSICAL SCIENCE LAB**

A lab course designed to supplement PHYS 1204. Designed for the non-science major. Taken with PHYS 1204 satisfies the requirement with a physical science lab. Corequisite: PHYS 1204



## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **PHYS 1204 GENERAL PHYSICAL SCIENCE (N)**

Introduction to the fields of physics, chemistry, astronomy, geology and meteorology. Includes a short review on the metric system, scientific notation and scientific digits. Designed for the non-science major. Prerequisites: [R] [M]

### **PHYS 1214 GENERAL PHYSICS II (L, N)**

Continuation of PHYS 1114: electricity, magnetism, optics, quantum physics, atomic and nuclear structure. Lab: three hours per week. Prerequisite: PHYS 1114

### **PHYS 2014 PHYSICS I (ENGINEERING) (L, N)**

Calculus-based introductory course for science, math and engineering majors. Mechanics, waves, heat and thermodynamics. Two hours lab per week. Prerequisites: [R], MATH 2145

### **PHYS 2114 PHYSICS II (ENGINEERING) (L, N)**

Continuation of PHYS 2014: electricity, magnetism and optics. Prerequisite: PHYS 2014

## PHYSIOLOGICAL SCIENCES

### **PSIO 2311 HUMAN PHYSIOLOGY LABORATORY**

Laboratory supplementing PSIO 2313. Structure and function of the systems of the human body. Enrollment requires credit or concurrent enrollment in BIOL 1515. This course will provide laboratory credit for students in an approved LPN or paramedic program. Corequisite: BIOL 1515

### **PSIO 2314 HUMAN PHYSIOLOGY**

Structure and function of the systems of the human body. Lab: three hours per week. Prerequisite: CHEM 1214 or CHEM 1314

## POLICE SCIENCE

### **PLSC 1103 INTRODUCTION TO FORENSIC SCIENCE**

A survey of the ways in which the knowledge and technology of science are applied to the definition and enforcement of civil and criminal law.

### **PLSC 1123 INTRODUCTION TO LAW ENFORCEMENT AND POLICE PROCEDURES**

Explores the history, philosophy, and role of law enforcement in our society and the criminal justice system

### **PLSC 1133 ETHICS AND PROFESSIONAL BEHAVIOR IN LAW ENFORCEMENT**

This is an introductory course in the science of moral philosophy and ethical standards and how they apply to law enforcement. Students will explore their professional duties when facing ethical dilemmas in the criminal justice career field.

### **PLSC 1143 TRAFFIC**

Students will learn the police responsibility in traffic control and enforcement, routine duties, and accident investigation and reporting.

### **PLSC 1211 FIREARMS**

Care and use of police firearms, including legal provisions and restrictions. Open only to COP (Collegiate Officer Program) students. Prerequisites: PLSC 2103, Department Head Approval

### **PLSC 1213 RULES OF EVIDENCE**

Tests of admissibility applied by the courts.

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **PLSC 1223 PENAL CODE AND RELATED CRIMINAL LAWS**

Analyze the legal basis for law enforcement and their function within the criminal justice system. Studies and explains the penal code, formation of law enforcement bodies, laws, statutes, ordinances, and regulatory functions as they apply to police operations and procedures.

### **PLSC 1313 PATROL PROCEDURES**

An examination of the types and methods of patrol activities. Studies include patrol techniques, hazard awareness, decision-making and tactical considerations. Prerequisites: PLSC 1223, PLSC 1123

### **PLSC 1320 (1-4) TECHNICAL PROBLEMS - POLICE SCIENCE**

One to four, maximum six credits. Technical problems that are of particular interest to police science majors.

### **PLSC 1413 POLICE-COMMUNITY RELATIONS**

Examines the relationships that exist between the police and community they serve. Emphasis will be placed on the officer's role relative to the community, crime prevention, civil rights, and the elements of effective community relations.

### **PLSC 1423 INTERVIEWING SKILLS**

Presents a variety of techniques effective for interviewing and discusses the mental and physical factors as well as legal considerations that govern their application.

### **PLSC 1433 CRIME SCENE PROCESSING AND PHOTOGRAPHY**

Course includes basic and advance photographic principles and theories as they relate to law enforcement with an emphasis on crime scene documentation. Advanced crime scene processing documentation techniques dealing with court preparation and presentation will also be covered. Prerequisite: PLSC 1103

### **PLSC 2050 (1-6) TECHNOLOGICAL PROBLEMS**

One to six, maximum six credits. A study of applied problems that are of particular interest to the technologist.

### **PLSC 2111 DEFENSIVE TACTICS**

The study and practice of methods of defense employed by police officers. Open only to Collegiate Officer Program (COP) students. Prerequisite: Department Head Approval

### **PLSC 2133 POLICE ADMINISTRATION**

Presentation of the social issues and daily problems facing police administration in a law enforcement organization. Study includes police leadership, organization, planning and research, inspectional service. Prerequisite: 28 or more completed semester hours

### **PLSC 2143 INTRODUCTION TO CONSTITUTIONAL LAW**

Constitutional law, its history and development; for the police science student. Prerequisite: POLS 1113

### **PLSC 2211 EMERGENCY VEHICLE OPERATION**

The legal aspect of emergency vehicle operation, desirable law enforcement driving behaviors and the proper handling of a vehicle in non-emergency, emergency and pursuit modes. Limited to Collegiate Officer Program (COP) students. Prerequisite: Department Head Approval

### **PLSC 2213 PRINCIPLES OF INVESTIGATION AND INTERVIEW**

Examines the general principles of police investigations, including the evaluation, processing, and assignment of criminal complaints; methods of locating, collecting, and preserving evidence; interview and interrogation techniques; and courtroom testimony. Prerequisite: PLSC 1223

### **PLSC 2222 POLICE RECORDS AND REPORTS**

Explores the organization and operations of the centralized record division in law enforcement agencies, and studies the proper use and function of police forms and reports. Prerequisite: PLSC 1223

### **PLSC 2223 JUVENILE ASSISTANCE AND CONTROL**

Organization, function and jurisdiction of the juvenile division; methods of handling, processing and detention of juveniles; case disposition and court procedures.

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **PLSC 2253 SURVEY IN POLICE SCIENCE**

A survey course to complete the Collegiate Officers Program to include general certifications required by the Council on Law Enforcement Education and Training mandated by State Bill 920.

### **PLSC 2413 TECHNICAL INVESTIGATION I**

This course covers the role of the crime scene investigator in criminal investigations. Areas of study include latent fingerprints, casting, ballistics, crime scene photography, and collection and preservation of evidence. Prerequisite: PLSC 2213

### **PLSC 2423 BLOODSTAIN INTERPRETATION**

Covers the techniques of identification of various stains and the methods used in determining whether or not the stain is blood. Topics include the significance of bloodstain evidence and its role in criminal investigation; detection and identification of stains and patterns; flight characteristics and stain pattern of human blood, blood detection and collection techniques; and the preservation of bloodstain evidence. Lab: two hours per week. Prerequisites: PLSC 2413, CHEM 1104, BIOL 1303, BIOL 1311

### **PLSC 2434 FINGERPRINT IDENTIFICATION**

Advanced techniques of fingerprint development with an emphasis on fingerprint comparison and identification. Lab: two hours per week. Prerequisite: PLSC 1103

### **PLSC 2443 CRIME SCENE RECONSTRUCTION**

Provides an overview of reconstruction techniques, means of evaluating and interpretation of evidence from crime scenes, causation factors and the validity of physical evidence. Lab: two hours per week. Prerequisite: PLSC 2413

### **PLSC 2513 CRISIS INTERVENTION**

The police officer's role in a crisis situation. Areas examined include domestic disturbances, death notification and conflict resolution. Prerequisite: PSYC 1113

### **PLSC 2523 FORENSIC ANTHROPOLOGY AND ARCHEOLOGY**

Provides the students with an introduction to the application of anthropological and archaeological techniques in law enforcement.

### **PLSC 2533 COURTROOM TESTIMONY AND PRESENTATION**

Provides the student with a step-by-step process of investigating crime(s) and methodically prepare the case for submission in a court of law.

### **PLSC 2543 OCCUPATIONAL PROFICIENCY**

This course is designed to evaluate the graduate's proficiency in their major field of study. Areas to be assessed include communication skills, job interviewing techniques and professional competencies. Prerequisite: student must be within one (1) semester of graduation.

### **PLSC 2650 (1-4) TECHNOLOGICAL PROBLEMS**

One to four, maximum four credits. Special project will be assigned by the advisor with the approval of the department head. A comprehensive written report of the work accomplished must be prepared and approved. Before credit is received, an examination may also be required.

## **POLITICAL SCIENCE**

### **POLS 1113 AMERICAN GOVERNMENT (S)**

General introduction to the Federal Governmental system. This course will emphasize basic principles of government such as the function of each branch of government. Topics of study shall include but not be limited to constitutional principles, federalism, civil liberties, civil rights, political participation, public opinion, interest groups, political parties, elections, media, congress, presidency, bureaucracy, judiciary, economic policy, domestic policy, and the general principles of state/local government. Prerequisites: [R] [W]

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **POLS 1320 (1-6) POLITICAL SCIENCE – SPECIAL TOPICS**

One to six credits, six maximum. A study of applied problems that are special interest.

### **POLS 2023 CIVIL RIGHTS AND LIBERTIES**

A study of the civil rights and civil liberties as reference in the Bill of Rights to the Constitution of the United States.

Prerequisite: POLS 1113

### **POLS 2053 STATE AND LOCAL GOVERNMENT**

Organization, processes and functions of American state and local governments, their relationship to each other and to the national government. Pre/Corequisite: POLS 1113

### **POLS 2113 COMPARATIVE POLITICS**

A comparative study of the political processes and institutions of selected contemporary societies; includes an introduction to concepts and methods of comparative politics. Prerequisite: POLS 1113

### **POLS 2523 ETHICS IN BEHAVIORAL SCIENCES**

Introduction to key topics in professional ethics and issues. Emphasis on ethical decision-making as an ongoing process and involving such topics as diversity issues, confidentiality, therapist/counselor confidence level, and competence. This course will also examine client rights, unethical behavior and malpractice issues. The course content is designed for psychology majors, but is also well-suited for students majoring in nursing, behavioral sciences and other health provider fields. (Will be cross-listed with PSYC 2523 and SOC 2523)

### **POLS 3223 PROBLEMS IN PUBLIC SAFETY**

Research and investigation on selected problems in the field of public policy. Prerequisite: POLS 1113 or Department Head Approval

## **POWER TRANSMISSION AND DISTRIBUTION TECHNOLOGY**

### **PTDT 1102 ELEMENTS OF ELECTRICITY AND ELECTRONICS**

An introduction to the elementary principles of basic electric units, Ohm's Law circuit solutions of series and parallel network, magnetism, inductance and capacitance. Same as EET 1102.

### **PTDT 1103 PLAN READING FOR PTDT**

This course will cover topics associated with construction drawing for distribution, transmission and substation projects. Topics will include organization and relationship of drawings, specifications, symbols, dimensions, scales and job notes.

### **PTDT 1104 INTRODUCTION TO THE UTILITY INDUSTRY/CLIMBING**

This course will introduce the student to the career paths in the electrical utility industry both public and private. The course will present materials to help an individual determine if the utility industry is the correct career path for them. The course will include the basic principles, techniques, and procedures of overhead line construction, including pole climbing. Lab: four hours per week.

### **PTDT 1154 ELECTRICAL CIRCUITS-HIGH VOLTAGE**

The study of electricity involving electrical properties of materials, electrical laws, units, components, impedance, resonance and magnetism. Lab: two hours per week. Pre/Corequisite: PTDT 1104

### **PTDT 1203 INTERNSHIP I**

A partnership between industry and education program to allow students to utilize the learned skills and knowledge acquired previously within their educational program or previous internship experience. Students will gain hands-on knowledge by working directly with industry professionals. Students will work with industry partners within a variety of roles and with a number of different types of material and equipment. Prerequisite: Department Head Approval

### **PTDT 1303 INTERNSHIP II**

A partnership between industry and education program to allow students to utilize the learned skills and knowledge acquired previously within their educational program or previous internship experience. Students will gain hands-on

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

knowledge by working directly with industry professionals. Students will work with industry partners within a variety of roles and with a number of different types of material and equipment. Prerequisite: Department Head Approval

### **PTDT 1353 LINEMAN SAFETY/EQUIPMENT**

An overview of the specific concerns and equipment used by the power transmission technician. Lab: two hours per week. Pre/Corequisite: PTDT 1104

### **PTDT 1403 INTERNSHIP III**

A partnership between industry and education program to allow students to utilize the learned skills and knowledge acquired previously within their educational program or previous internship experience. Students will gain hands-on knowledge by working directly with industry professionals. Students will work with industry partners within a variety of roles and with a number of different types of material and equipment. Prerequisite: Department Head Approval

### **PTDT 1453 PRINCIPLES OF POWER TRANSMISSION**

A course dedicated to the study of transmitting electrical power. The course will contain working practices and situations that transmission linemen encounter: extra high voltage, towers, pole configurations, bare hands and other work practices. Lab: two hours per week. Prerequisite: PTDT 1104

### **PTDT 2003 PRINCIPLES OF POWER DISTRIBUTION**

A study of underground and above ground high voltage distribution systems. Transformer configurations, conduit sizing, line voltage drops, etc. will be discussed, as well as equipment and safety procedures for both. Lab: two hours per week. Pre/Corequisite: PTDT 1154

### **PTDT 2013 DRIVER SAFETY AND CDL TRAINING**

This course will prepare students to drive commercial vehicles in a safe manner and help students prepare for the commercial driver's license. Students must have required proof of passing the CDL permit before enrolling. Prerequisite: Department Head Approval

### **PTDT 2023 PRINCIPLES OF SWITCHING AND METERING**

Students will learn the basic switching and metering systems used in the power industry. Pre/Corequisite: PTDT 2003

### **PTDT 2043 ELECTRICAL CAPSTONE EXPERIENCE**

This is the final course in the curriculum and various topics of the power industry, job searching techniques and related topics will be covered. Course content will be tailored to the needs of the students to prepare them for job placement. Prerequisite: Department Head Approval

### **PTDT 2104 INTERNSHIP IV**

A partnership between industry and education program to allow students to utilize the learned skills and knowledge acquired previously within their educational program or previous internship experience. Students will gain hands-on knowledge by working directly with industry professionals. Students will work with industry partners within a variety of roles and with a number of different types of material and equipment. Prerequisite: Department Head Approval

## PROFESSIONAL DEVELOPMENT

### **PD 1101 CAREER PREP**

This course will provide students an opportunity to gain the proper tools for successful entry or reentry into their career field of interest. Students will complete a personal inventory of their interests, skills, and experiences for inclusion in resumes, job applications, and employment interviews. Students will prepare resumes and cover letters and participate in mock interviews.

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### PSYCHOLOGY

#### **PSYC 1113 INTRODUCTORY PSYCHOLOGY (S)**

General introduction to the science of behavior and mental processes. Emphasizes major theoretical perspectives. Topics of study include perception, states of consciousness, memory, motivation, development, personality, psychological disorders and therapies. Prerequisites: [R] [W]

#### **PSYC 2050 (1-4) PSYCHOLOGY SEMINAR (S)**

Course topics vary. The content may be designed for psychology majors but is also valuable to those students majoring in nursing, alcohol and substance abuse counseling, public service, law enforcement, child development and education. Prerequisite: PSYC 1113

#### **PSYC 2113 PSYCHOLOGY OF ADJUSTMENT (S)**

Principles of the study of adjustment and behavior. Examines psychological process of coping and adapting to everyday life types of problems to include conflicts, pressures and challenges. Some emphasis will be placed on a sociocultural approach to managing adjustment by examining the factors of culture, ethnicity and gender. Prerequisite: PSYC 1113

#### **PSYC 2213 LIFESPAN HUMAN DEVELOPMENT (S)**

Study of the life span of humans. Emphasizes both experimental and theoretical approaches to the study of cognitive, personality, social, perceptual and physical development from conception to death. Prerequisite: PSYC 1113

#### **PSYC 2223 CHILD PSYCHOLOGY (S)**

Effects of heredity and environment on physical, mental, social and emotional development of the individual through adolescence. Prerequisite: PSYC 1113

#### **PSYC 2333 PSYCHOLOGY OF RACE (S)**

Examines the human response to and perceptions of racial differences through the lens of anthropology, mythology, slavery, sexuality and sociology. Prerequisites: [R] [W]

#### **PSYC 2413 ABNORMAL PSYCHOLOGY (S)**

The course will offer the student a broad-based perspective on psychological disorders of childhood, adolescence, and adulthood. The focus will be on the major patterns of abnormal behavior as well as causal factors. Course content is designed for psychology majors but is also valuable to those majoring in nursing, alcohol and substance abuse counseling, public service, law enforcement, child development and education. Prerequisite: PSYC 1113

#### **PSYC 2450 (1-6) SPECIAL TOPICS**

One to six credits, six credits maximum. Variable course credit of one to six hours. Examines contemporary issues and problems within psychology. This course may be cross-listed with other technical problems or special topics sections. Prerequisites: [R] [W], Department Head Approval

#### **PSYC 2523 ETHICS IN BEHAVIORAL SCIENCES (S)**

Introduction to key topics in professional ethics and issues. Emphasis on ethical decision-making as an ongoing process and involving such topics as diversity issues, confidentiality, therapist/counselor confidence level, and competence. This course will also examine client rights, unethical behavior and malpractice issues. The course content is designed for psychology majors, but is also well-suited for students majoring in nursing, behavioral sciences and other health provider fields. (Will be cross listed with POLS 2523 and SOC 2523)

#### **PSYC 2713 PSYCHOLOGY OF AGING (S)**

Provides an overview of adult development and aging. Focuses on the major theories of aging and how aging affects physical, cognitive and social functioning. Special topics include personality and aging, health aging, dementia and death and dying. Prerequisite: PSYC 1113

# Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

## PUBLIC SAFETY MANAGEMENT

### **PSM 3013 MULTI-AGENCY RESPONSE TO EMERGENCY/CRITICAL INCIDENTS**

Students examine the unique role of the local first responder. Students will identify the common elements of a disaster response and the roles of each emergency responder discipline in the response and recovery. Course emphasis is on the actions and procedures “at the scene” where decisions are made rather than concepts and policies applied by officials physically removed from the scene.

### **PSM 3023 TACTICAL EMERGENCY MANAGEMENT**

Students will focus on a comprehensive, up-to-date overview of emergency management, from an all-hazards perspective. Students will examine threats including natural and technological disasters, as well as intentional threats of domestic and international terrorism.

### **PSM 3033 STRATEGIC PLANNING AND RISK ANALYSIS IN PUBLIC SAFETY AGENCIES**

This course will help the public safety manager to formulate vision, mission and strategic plans. Students will learn how to detect the strengths, weaknesses, opportunities and threats (SWOT) that drive strategy; identify strategies to better position the agency for long term community service; execute strategy and deliver results through people and processes; and establish strategic planning, monitoring and controlling mechanisms that ensure positive results.

### **PSM 3043 COMMUNITY RELATIONS IN PUBLIC SAFETY**

This course will explore the community relations theory and why positive community perception is critical to operational effectiveness during a crisis event. Students will gain the skills necessary to be effective communicators and educators to the public in times of crisis and in their daily function as a public safety manager. The course will also develop the skills necessary to interact with the media regarding public safety issues and crisis situations.

### **PSM 3223 PROFESSIONAL DEVELOPMENT IN PUBLIC SAFETY**

Students will develop a professional development portfolio through the completion of a series of projects.

### **PSM 3243 LEADERSHIP IN PUBLIC SAFETY**

This course is designed to provide leadership skills within public safety departments. It will provide students with different leadership styles that may be utilized. It will also educate new supervisors to adapt and problem solve issues that may be encountered while dealing with public safety employees.

### **PSM 3253 PUBLIC SAFETY CONTINGENCY PLANNING**

This course provides the student with knowledge of the techniques for the development of continuity of operations (COOP) and Continuity of Government (COG) plans and community hazard planning. The overall philosophy of this course is set forth by the Department of Homeland Security, the Environmental Protection Agency and Department of Transportation and their internal agencies. Sample plans will be developed with emphasis on assessment, equipment requirements, collateral and mutual aid support agreements and methods for testing and updating plans.

### **PSM 3263 INTRODUCTION TO TERRORISM THREATS**

Upon completion of this course the student will understand the history and motivation of Terrorists and their activities. The student will examine how groups and individuals evolve from activism and how governments respond to such events.

### **PSM 3273 PUBLIC SAFETY CAPABILITIES AND PERFORMANCE-BASED PROGRAMS**

Public safety agencies must conduct performance assessments and report results to the governing board and community in which they serve. This course prepares the student to perform different types of assessments at the project, program, agency, and organizational levels. Evaluative frameworks will be explored so the best approach may be utilized.

### **PSM 3650(1-4) TECHNICAL PROJECT 3000 LEVEL**

A study of variable topics in emergency responder technologies at the 3000 level. May be repeated with different topics. Prerequisite: Department Head Approval

### **PSM 4050 (1-4) TECHNICAL PROJECT 4000 LEVEL**

A study of variable topics in emergency responder technologies at the 4000 level. May be repeated with different topics. Prerequisite: Department Head Approval

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **PSM 4113 TECHNICAL DISSEMINATION OF EMERGENCY PUBLIC INFORMATION**

Students explore the role of traditional (print, radio, and television) and newer media technologies in the distribution of the news. Students examine the functions, roles, responsibilities, and behavior of the media in times of national and international threats to national security as well as local incidents. Students will apply “tools” learned in class to address the media and present information to the general public in an effective and responsible manner.

### **PSM 4123 ETHICAL PRACTICES IN PUBLIC SAFETY**

This course explores the case issues and philosophies as they relate to accountability in the public safety environment.

### **PSM 4133 LEGAL ISSUES FACING PUBLIC SAFETY AGENCIES**

Students examine the structure and dynamics of the law governing the authority and actions of responding agencies. Students will receive an in-depth overview of laws, policy, strategy, organization and plans for dealing with various natural, accidental and premeditated emergencies/critical incidents.

### **PSM 4143 PERSONNEL OVERSIGHT STRATEGIES**

This course will explore the dynamics of managing personnel in the public safety organization. Curriculum is designed to develop student skills in personnel management, staffing, compensation, benefits and labor relations.

### **PSM 4153 TECH RESEARCH & DESIGN IN PUBLIC SAFETY**

The class will incorporate both quantitative and qualitative research methods and the application of statistical analysis of data. Introduction to the utilization of clinical and management information systems to access, archive and analyze data will be examined. Application of theoretical constructs and identification of cost/quality researchable issues will be evaluated through the development of student research proposals. Students will develop understanding of class concepts through application of learned principles within his/her practice setting.

### **PSM 4233 INTERNATIONAL ASSESSMENT AND RESPONSE TO CRISIS**

Students will evaluate international critical events, cultures, beliefs, and response to disasters. The student will be provided practical and theoretical education in global disaster management. This course will cover the management of preparedness, response, recover and mitigation of disasters the world faces today.

### **PSM 4243 PUBLIC SAFETY GRANT WRITING**

The purpose of this course is to develop the student’s ability to prepare, write and submit a research grant proposal.

### **PSM 4253 CRITICAL INCIDENT PSYCHOLOGY FOR PUBLIC SAFETY**

Emphasis of this course is on public safety employees and their psychological well-being before during and after critical incident response. The student will also learn and understand compassion fatigue, traumatic stress and crisis intervention as it relates to the specific needs of community during the same event.

### **PSM 4513 ADVANCED OCCUPATIONAL PROFICIENCY IN PUBLIC SAFETY**

This course is the capstone course of the program and is designed to assess the student’s proficiency in their major field of study. Students will write essays based on core material covered in the program, which address real world situations. Students will then present and defend their essays to a panel of assessors along with their ePortfolio in an assessment center process. The assessment is based on the student’s ability to articulate their knowledge, skills, and abilities in managing real world situations. Prerequisites: PSM 3013, PSM 3023, PSM 3033, PSM 3043, PSM 4113, PSM 4123, PSM 4133, PSM 4143, PSM 4153

### **PSM 4523 PRACTICUM**

Students will develop a comprehensive organizational program or significantly revitalize a program that improves the workplace or the community served. The project will be based on quantitative and/or qualitative research, existing literature, and include a post-evaluative methodology to determine effectiveness and efficiency. Prerequisites: PSM 3013, PSM 3023, PSM 3033, PSM 3043, PSM 4113, PSM 4123, PSM 4133, PSM 4143, and PSM 4153

## **PUBLIC SERVICE**

### **PSER 1113 INTRODUCTION TO PUBLIC PERSONNEL ADMINISTRATION**

Principles of communication, recruitment and selection of human resources; job classification performance appraisal. Prerequisites: [R] [W] (Fall & Spring)



## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **PSER 1123 INTRODUCTION TO LEGAL CASE MANAGEMENT**

This course provides the student with a practical skills working knowledge of legal case management featuring such aspects of domestic law as premarital contracts, marriage, annulment, divorce, separate maintenance, custody, paternity, adoption, wage assignments, citations for contempt of court, preparation for trial exhibits, computations of child support, decrees and motions to modify divorce decrees. (Fall Only) Prerequisites: [R] [W]

### **PSER 2023 PUBLIC LAW**

Basic legal tenets and procedures affecting public and/or nonprofit agencies. Prerequisite: [R] [W] (Fall Only)

### **PSER 2050 (1-3) PRACTICUM**

Variable course credit of one to three hours for on-site public/nonprofit sector work experience; requires a detailed work journal or written report approved by advisor and copies of work product completed on the job. Prerequisite: Advisor Approval

### **PSER 2103 INTRODUCTION TO GRANT WRITING AND ADMINISTRATION**

Participants in this course will examine the entire grant proposal development process including research tools and techniques, criteria for narrowing the funding, effectively organizing and writing the proposal, packaging the proposal, follow-up and tracking. The course will provide practice and hands on work in the writing of a grant proposal for funding. This course will also offer grant administration, metrics, evaluation and reporting. Cross listed with WRTG 2103. Prerequisite: ENGL 1113

### **PSER 2113 ALTERNATIVE DISPUTE RESOLUTION**

Introduction to resolution of disputes outside the traditional courtroom procedures, with an overview of this rapidly growing area in the law, including mediation and arbitration. (Spring Only)

### **PSER 2213 INTRODUCTION TO PUBLIC SERVICE ORGANIZATIONS**

Introduction to principles and problems of public administration, organizational theory, budgeting, motivation and management of human resources and the political environment. Course content is focused on leadership of public/nonprofit agencies. Prerequisites: [R] [W] (Fall Only)

### **PSER 2223 LEADERSHIP AND GROUP DYNAMICS**

Leadership and Group Dynamics is designed to empower public service majors with the skills to improve their leadership abilities. The course integrates research, case studies and classroom instructional technology that facilitate effective leadership in public/non-profit organizations. Prerequisites: [R] [W] (Spring Only)

### **PSER 2293 INTRODUCTION TO NON-PROFIT ORGANIZATIONS**

An overview of non-profit organizations and the importance of business and service functions in their long-term effectiveness and sustainability. Examines historical background, development, role, auspices, organization, and purposes of non-profit agencies. Special emphasis is placed on structure, program and organizational management, stewardship, fundraising, community building, volunteer services, and problems which confront these organizations.

### **PSER 2333 INTRODUCTORY PUBLIC/NONPROFIT FINANCE AND BUDGET**

Covers revenue sources, accounting principles and resource allocation for public/nonprofit agencies. Prerequisites: [R] [W]

### **PSER 2453 TECHNICAL PROBLEMS – PUBLIC SERVICE**

Variable course credit of one to three hours. Examines contemporary issues and problems influencing the formation of public policy and the roles of public/nonprofit agencies. Prerequisites: [R] [W] (Fall and Spring)

### **PSER 3333 PUBLIC SECTOR BUDGETING AND RESOURCE MANAGEMENT**

Covers accounting principles, revenue sources, and allocation of finances for public/nonprofit groups. Requires research component. Students who have successfully completed PSER 2333 may not receive credit for this course. Prerequisites: [R] [W]

# Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

## RADIOLOGIC TECHNOLOGY

This is a selective admission program. See department for details.

### **RAD 1113 INTRODUCTION TO RADIOLOGIC SCIENCE AND HEALTHCARE**

Provides an overview of the radiographer and practitioners role in the health care delivery system. The principles, practices and policies of health care organizations are discussed. A foundation in ethics and law related to the practice of medical imaging is also included. Prerequisite: Program acceptance; Corequisites: RAD 1123, RAD 1233

### **RAD 1123 PATIENT CARE IN RADIOLOGIC SCIENCE**

This course provides the concepts of patient care during routine and emergency radiographic procedures. The radiographer's role in patient education is identified. The basic concepts of pharmacology, venipuncture and administration of diagnostic contrast agents and intravenous medication are included. Prerequisite: Program acceptance; Corequisites: RAD 1113, RAD 1233

### **RAD 1233 RADIOGRAPHIC PROCEDURES I**

This course provides a knowledge base necessary to perform standard radiographic procedures of the trunk and extremities. Factors considered in the evaluation of diagnostic images are included. Prerequisites: Selective acceptance, Corequisites: RAD 1113, RAD 1123

### **RAD 1323 DIGITAL IMAGE ACQUISITION AND DISPLAY**

This course provides an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving and retrieval are discussed. Prerequisites: RAD 1434, RAD 2233; Corequisites: RAD 2223, RAD 2324

### **RAD 1333 PRINCIPLES OF IMAGING**

This course establishes a knowledge base in factors that govern the image production process. Prerequisite: RAD 1233; Corequisites: RAD 1344, RAD 2233

### **RAD 1344 RADIOLOGIC CLINICAL PRACTICE I**

Course content and clinical practice experiences are designed to provide basic patient care and assessment plus sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Prerequisite: RAD 1233; Corequisites: RAD 1333, RAD 2233

### **RAD 1434 RADIOLOGIC CLINICAL PRACTICE II**

This course builds upon Radiologic Clinical Practice I. Clinical practice experiences are designed to provide patient care and assessment plus sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Prerequisite: RAD 1344

### **RAD 2113 IMAGING PHYSICS**

This course establishes a basic knowledge of atomic structure and terminology. The nature and characteristics of radiation, x-ray production and the fundamentals of photon interactions with matter are also presented. Course content establishes a knowledge base in radiographic, fluoroscopic and mobile equipment and design, as well as quality control procedures. Prerequisite: RAD 2223; Corequisites: RAD 2333, RAD 2434

### **RAD 2223 RADIATION BIOLOGY AND PROTECTION**

This course provides an overview of the radiation effects on molecules, cells, tissues and the body as a whole. Factors affecting biological response including acute and chronic effects are discussed. An overview of the principles of radiation protection, including the radiographer's responsibilities is also presented. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. Prerequisites: RAD 1434, RAD 2233; Corequisites: RAD 1323, RAD 2324

### **RAD 2233 RADIOGRAPHIC PROCEDURES II**

This course provides the knowledge base necessary to perform standard and special imaging procedures of the entire body. The evaluation of diagnostic images is included. The effects of various disease processes on radiographic appearances, as well as the impact on exposure factor selection are included. Prerequisite: RAD 1233; Corequisites: RAD 1333, RAD 1344

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **RAD 2324 RADIOLOGIC CLINICAL PRACTICE III**

This course builds upon Radiologic Clinical Practice I and II. Clinical practice experiences are designed to provide patient care and assessment plus sequentially develop, apply critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiographic procedures. Prerequisites: RAD 1434, RAD 2233; Corequisites: RAD 1323, RAD 2223

### **RAD 2333 ADVANCED MODALITIES**

This course includes relative basic sectional anatomy, and is designed to provide a basic understanding of the operation of a computed tomography (CT) device. Students will also have an introduction to other modalities. Prerequisites: RAD 2223, RAD 2324; Corequisites: RAD 2113, RAD 2434

### **RAD 2434 RADIOLOGIC CLINICAL PRACTICE IV**

This course builds upon Radiologic Clinical Practice I, II, and III. Clinical practice experiences are designed to provide patient care and assessment plus sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Prerequisites: RAD 1113, RAD 1123, RAD 1233, RAD 1323, RAD 1333, RAD 1344, RAD 1434, RAD 2223, RAD 2233, RAD 2324; Corequisites: RAD 2113, RAD 2333

## SCIENCE

### **SCI 0124 GREAT IDEAS IN SCIENCE**

An introduction to the physical and biological sciences using an integrated approach. Basic scientific principles are introduced, followed by how these principles can be applied to the different scientific disciplines. Designed for students who have not met all high school curricular and performance requirements in the sciences. Lab: two hours per week.

### **SCI 2000 (1-5) SPECIAL TOPICS IN SCIENCE**

Special topics in science will be explored with the primary focus on laboratory-based inquiry and scientific method. Topics can include physical or biological science focus. Some coursework will be delivered and assessed online. Variable credit hours. Prerequisite: Department Head Approval.

## SOCIOLOGY

### **SOC 1113 INTRODUCTORY SOCIOLOGY (S)**

An introduction to the science of human society with emphasis on basic concepts. Assists the student in understanding the social influences on day-to-day life. Prerequisites: [R] [W]

### **SOC 2023 MARRIAGE AND FAMILY (S)**

Analyzes male/female role interaction as it applies to the development, maintenance and disorganization of the family, particularly in the social context of American society. Analysis centers on courtship patterns, mate selection, marital adjustment problems and marital disorganization with some cross-cultural contrasts. Prerequisite: SOC 1113

### **SOC 2123 SOCIAL PROBLEMS (S)**

Exploration in selected social issues in contemporary American society, such as deviance, poverty, sexism, racism and ageism. Prerequisite: SOC 1113

### **SOC 2143 SOCIAL STRATIFICATION (S)**

Exploration in selected social issues in contemporary American society, such as deviance, poverty, sexism, racism and ageism. Prerequisites: [R] [W]

### **SOC 2213 CRIME AND DELINQUENCY**

The crime and delinquency course will review sociological and psychological research regarding the causes of crime and current crime trends. Modern trends in the control and treatment of criminal behavior will be explored. In addition, this course will explore the major theories in the field of crime and delinquency. Prerequisite: SOC 1113

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **SOC 2450 (1-6) SOCIOLOGY-SPECIAL TOPICS**

Variable credit course of one to six hours, maximum six credits. Examines contemporary issues and problems within sociology. This course may be cross listed with other technical problems or special topics sections in another discipline. Prerequisites: [R] [W]

### **SOC 2523 ETHICS IN BEHAVIORAL SCIENCES**

Introduction to key topics in professional ethics and issues. Emphasis on ethical decision-making as an ongoing process and involving such topics as diversity issues, confidentiality, therapist/counselor confidence level, and competence. This course will also examine client rights, unethical behavior and malpractice issues. The course content is designed for psychology majors, but is also well-suited for students majoring in nursing, behavioral sciences and other health provider fields. (Will be cross listed with POLS 2523 and PSYC 2523)

### **SOC 3623 CULTURAL DIVERSITY (H, S)**

Historical and contemporary experiences of racial and ethnic groups. Consideration of theories related to dominant-subordinate group relations, prejudice, discrimination and the current social conditions of minority groups living in the United States. Prerequisite: Junior Standing.

## **SONOGRAPHY**

This is a selective admission program. See department for details.

### **SON 1103 CARDIOVASCULAR ULTRASOUND I**

Emphasis on basic cardiac anatomy, imaging techniques and principles. Topics include basic imaging protocols, scan planes in relation to cardiac anatomy and principles of acquisition of diagnostic images. Students will review basic gross anatomy and cross sectional anatomy of the lower extremity peripheral arterial, venous, extracranial and deep abdominal vascular systems. Emphasis will be placed on the normal exam. Students will begin to familiarize themselves with the basic knobology of direct and indirect vascular testing and standard protocols. Prerequisite: Accepted to program; Corequisites: SON 1153, SON 2313

### **SON 1113 ULTRASOUND PHYSICS AND INSTRUMENTATION I**

A course in the physics and instrumentation of ultrasound which will cover ultrasonic wave generation and propagation, interaction of sound and matter, transducer and instrumentation designs, ultrasound scanning modes, image artifacts and quality, Doppler effect and Doppler instrumentation components. Prerequisites: SON 1103, SON 1153, SON 2313; Corequisites: SON 1203, SON 1254

### **SON 1153 PATIENT CARE, MEDICAL ETHICS & LAW**

Students will learn sonographer safety; current Sonographic protocols; and basic patient care. Vital sign assessment will be introduced to the student, as well as medical terminology. This course covers study techniques such as effective note taking, effective listening, and test-taking strategies. For the practitioner and student entering the clinical environment, it offers step-by-step descriptions of basic medical procedures and patient care, showing how to safely and ergonomically perform procedures and how to interact with patients in a clinical setting. This includes patient communication and psychological support strategies, as well as patient transfer techniques. Topics such as infection control will be emphasized, as well as current utilization of standard precautions to prevent the spread of infection. Emergency conditions and procedures, to include first aid and resuscitation techniques will be presented to the student. A study of medical ethics & the laws that affect and pertain to Sonographers and other imaging professionals is introduced and explained. This class will also help students make knowledgeable decisions about patient care issues in respect to ethics and law. This class examines the many issues that affect sonographers and other imaging professional and applies the examples to real-world situations. The student will be introduced to topics such as patient autonomy, medical documentation, informed consent, confidentiality & HIPPA, managed care, diversity and death and dying. The student will learn to apply their own values, common sense, and applicable healthcare law and medical ethics to solve challenging dilemmas. Professional interaction skills and the sonographer's professional scope of practice will be emphasized. Prerequisite: Accepted to program; Corequisites: SON 1103, SON 2313

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **SON 1203 CARDIOVASCULAR ULTRASOUND II**

An emphasis on adult acquired cardiac pathologies. Topics include cardiovascular pathophysiology; quantitative measurements and the application of 2-D, M-Mode and Doppler. Recognition of the sonographic appearances of cardiovascular disease is stressed. Students will review the previous semester's concepts, and add the abnormal upper arterial and venous systems anatomy. Basic common disease concepts and clinical assessment will continue. Ultrasound criteria and protocols for normal and common abnormal studies will be reviewed and practiced in the laboratory setting. Prerequisites: SON 1103, SON 1153, SON 2313; Corequisites: SON 1113, SON 1254

### **SON 1213 ULTRASOUND PHYSICS & INSTRUMENTATION II**

Continuation of son 1113 physics & instrumentation I. A course in the physics and instrumentation of ultrasound which will cover ultrasonic wave generation and propagation, interaction of sound and matter, transducer and instrumentation designs, ultrasound scanning modes, image artifacts and quality, doppler effect and doppler instrumentation components. Prerequisite: SON 1113; Corequisites: SON 2303, SON 2354

### **SON 1254 CLINICAL EXPERIENCE I**

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisites: SON 1103, SON 1153, SON 2313; Corequisites: SON 1113, SON 1203

### **SON 2253 CLINICAL EXPERIENCE II**

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 1254

### **SON 2303 CARDIOVASCULAR ULTRASOUND III**

Instruction in advanced echocardiographic procedures. Topics include stress echo, related diagnostic imaging and related noninvasive cardiac testing. Students will build on previous semesters, adding more advanced and uncommon pathology of the vascular patient. The student will work on perfecting history taking, patient assessment, critical thinking and analyzing data. Advanced direct and indirect vascular procedures will be covered and analyzed. Prerequisites: SON 1113, 1203, 2253; Corequisites: SON 1213, SON 2354

### **SON 2313 CARDIOVASCULAR CONCEPTS**

This course is a continuation from SON 1153 and will continue to expand the knowledge of the cardiovascular sonographer. The course is designed to prepare the student for the Cardiovascular Principles section of their Registry. The anatomy and physiology of the cardiac and vascular systems are presented, with special emphasis on the relationship and connection of the two systems. Topics such as cardiovascular anatomy, cardiovascular physiology and hemodynamics, pathology, pathophysiology, pharmacology of the cardiovascular system, the electrical conduction system, congenital heart defects, intracardiac pressures and their correlation with other cardiovascular phenomenon, coronary artery distribution, determinants and assessment of left ventricular performance and the phases of the cardiac cycle are discussed. Examination methods and interventional procedures are also explained. The textbook contains hundreds of sample questions that will help the student to prepare for clinical life as well as their national Registry. Prerequisite: Accepted to program; Corequisites: SON 1103, SON 1153

### **SON 2354 CLINICAL EXPERIENCE III**

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 2253; Corequisites: SON 1213, SON 2303

### **SON 2403 CARDIOVASCULAR ULTRASOUND IV**

A continuation of Cardiovascular Ultrasound III with emphasis on cardiac disease. A discussion of quantitative measurements and application of 2-D, M-Mode, Doppler and recognition of the sonographic appearances of cardiac disease is stressed. Students will develop a systematic approach to problem solving using critical thinking, and increase independent judgment to aid the provider in the evaluation of the peripheral vascular patient with vascular disease. A complete review in the laboratory setting of vascular anatomy, physiology, assessment, history taking and analyzing data for the preparation of the preliminary report. Prerequisites: SON 1213, SON 2303, SON 2354; Corequisite: SON 2454

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **SON 2454 CLINICAL EXPERIENCE IV**

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 1213, 2303, 2354; Corequisite: SON 2403

## **SPANISH**

### **SPAN 1113 SPANISH I**

Pronunciation, elements of grammar, reading and simple composition in Spanish combined with some exploration of Hispanic culture. Prerequisites: [R] [W]

### **SPAN 1223 SPANISH II**

Continuation of Spanish I with further development of pronunciation, elements of grammar, reading and simple composition in Spanish combined with some exploration of Hispanic culture. Prerequisite: SPAN 1113

### **SPAN 2050 (1-3) SPECIAL TOPICS IN SPANISH**

Variable credit course of one to three hours. Examines issues within the field of Spanish language, literature, culture, or linguistics. This course may be cross-listed with other courses in another discipline. Can be repeated for credit with different topic. Some courses may require Spanish language fluency.

### **SPAN 2113 INTERMEDIATE SPANISH I**

Further development of speaking, listening, reading and writing skills, along with short cultural and literary readings. Prerequisite: SPAN 1223 or CLEP score of 50

### **SPAN 2123 SPANISH FOR HERITAGE SPEAKERS**

An in-depth study of Spanish for the heritage speaker. Emphasis is placed on the development of reading and writing skills of those persons who speak Spanish but who have little or no formal study in the language. Prerequisite: CLEP score of 50 or Department Head Approval

### **SPAN 2133 INTERMEDIATE SPANISH II**

Consolidation of Spanish Language skills including vocabulary development, reading comprehension, oral fluency, and listening comprehension. Prerequisite: Spanish 2113 or Spanish CLEP score of 63

### **SPAN 2143 ADVANCED SPANISH GRAMMAR AND COMPOSITION**

An intensive study of Spanish grammar, composition and conversation designed to increase oral proficiency and to enhance written communication in Spanish in situations ranging from relatively simple to more complex. Prerequisite: SPAN 2113 or CLEP score of 50

## **SPEECH**

### **SPCH 1113 INTRODUCTION TO SPEECH COMMUNICATION**

Principles and techniques of preparation, participation in and evaluation of communication behavior in conversation, the interview, group discussion and public speech. A competency-based approach. Prerequisites: [R] [W]

### **SPCH 2723 INTERPERSONAL COMMUNICATION**

Focus is on developing a conceptual framework for viewing varied interpersonal relationships as transacted through communication. Through participation in class activities students are encouraged to develop skills appropriate to overcoming problems experienced in real-life situations. Prerequisites: [R] [W]

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### STATISTICS

#### **STAT 1103 FUNDAMENTALS OF STATISTICS**

This course will lay the foundation for further statistical study with a focus on analyzing situations, comparing statistical measurements, and interpreting the meaning of results from those measurements. This course teaches the key concepts of descriptive statistics along with the necessary algebra to help prepare students for Math 2103. Prerequisite: ICSM 0113

#### **STAT 2013 ELEMENTARY STATISTICS (A)**

Introduction to the theory and methods of statistics. Descriptive measures, elementary probability, samplings, estimation, hypothesis testing, correlation and regression. Prerequisite: [M]

### SURVEYING

#### **SURV 1101 INTRODUCTION TO SURVEYING**

Introduction to the profession of land surveying. Course will familiarize the student with the history of surveying in the United States, knowledge of the terminology as well as the equipment used in the profession. Students will gain an elementary knowledge of the duties and responsibilities of a professional land surveyor.

#### **SURV 1102 CONSTRUCTION SURVEYING**

Develop student's ability to utilize up-to-date instruments such as total station, theodolite, automatic and laser levels along with traditional accessory equipment in the performance of routine building construction tasks requiring applications of plane surveying theories and technologies for vertical and horizontal control. Differential and laser leveling, traversing, slope staking, topographic mapping and building layout are examples of the tasks to be taught.

#### **SURV 1133 FUNDAMENTALS OF GIS**

An introductory course in GIS and an accompanying lab using ESRI ArcGIS software. The course will discuss different functions of a GIS and its capabilities; GIS data collection and input; GIS data types and basic mapping concepts.

#### **SURV 1233 MICROSTATION**

An introductory course in MicroStation. Topics will include MicroStation design environment, viewing and zooming, models, levels, basic drawing tools, drawing with precision, modification tools, selecting and grouping elements and complex elements.

#### **SURV 1320 (1-6) TECHNICAL PROBLEMS IN SURVEYING**

One to six, maximum six credits. Technical problems in surveying that are of particular interest to technicians. Prerequisite: Department Head Approval

#### **SURV 2050 (1-6) ADVANCED TECHNICAL PROBLEMS IN SURVEYING**

One to six, maximum six credits. A study of problems in applied engineering science that are of particular interest to the engineering technician.

#### **SURV 2123 SURVEY BUSINESS MANAGEMENT**

This course will introduce the student to the fundamentals of business with an emphasis on running a surveying company. Business basics such as accounting, human resources, taxes, financing and legal principles will be introduced. Lastly, the course will provide the student with tips on how to run a successful surveying company.

#### **SURV 2143 HIGHWAY DESIGN AND CONSTRUCTION**

Study of transportation, roadways and their functions. Roadway foundations, pavement types, characteristics, composition and structural design; construction procedures; transportation systems planning.

#### **SURV 2213 REMOTE SENSING**

An introduction to the physics and technical issues surrounding the acquisition and utilization of remotely sensed airborne and satellite images for the study of physical and human landscapes. Techniques for analyzing and interpreting images for studying biological, geological, hydrological and oceanographic processes as well as human activities will be covered. Prerequisites: SURV 2614

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **SURV 2232 ROUTE SURVEYING**

Principles of route surveys, use of photogrammetry in route design and layout. Computer applications. Prerequisite: SURV 2614

### **\*SURV 2233 CIVIL CAD DRAFTING**

Covers a land survey CAD (computer-aided drafting) system, experience in contour maps, plan sheets, sections and details. Lab: three hours per week.

### **SURV 2242 RESIDENTIAL SUBDIVISION & DESIGN**

Fundamentals of land subdivision and platting. The course will discuss the role of the surveyor, land use controls, interest groups in land subdivisions, the platting process, subdivision surveying, and subdivision design principles and standards. Prerequisite: SURV 2232, (SURV 2233 OR SURV 1233)

### **SURV 2423 PHOTOGRAMMETRY**

Procedures and methods used for deriving metric information from photographs, analog processes for using aerial photographs in production of topographic maps, flight planning, and cost estimation in aerial mapping work. Introduction to photo-coordinate measurement devices and their calibration. Mathematics of modern photogrammetry. Prerequisites: SURV 2614

### **\*SURV 2433 CIVIL CAD DRAFTING II**

Continuation of SURV 2233. Advanced applications of civil CAD (computer-aided drafting) software to assigned civil or survey projects. Prerequisite: SURV 2233

### **SURV 2614 SURVEYING I**

First course in measurement science. Introduction and application of basic plane surveying procedures, linear and angular measurements and differential leveling, traverse and topographic surveys. Computer application to surveying calculations. Prerequisite: [R] [M]

### **SURV 2623 LEGAL PRINCIPLES - SURVEY I**

This course addresses the fundamental principles of real property as applied to land surveying and related professions. Discussion and applications center on practical situations and concepts commonly encountered while conducting boundary surveys and the determination of the extent of ownership rights. Students explore the scope of the surveyors' judiciary role in real property ownership. Pre/Corequisite: SURV 2614

### **SURV 2633 LEGALS PRINCIPLES - SURVEY II**

History of land surveying and law development, legal boundaries, title to land, public land surveys, and general principles for subdivision of a section. Prerequisite: SURV 2623

### **SURV 2643 ADVANCED SURVEYING**

Care and adjustment of instruments, controls by triangulation, measurement and computation of earthwork, topographic surveys with conventional instruments and photographic methods. Review of Oklahoma laws governing land surveys and professional licensing. Lab: three hours per week. Prerequisite: SURV 2614

### **SURV 2650 (1-6) TECHNICAL PROJECTS - SURVEYING**

One to six, maximum six credits. Special project will be assigned by the advisor with the approval of the department head. A comprehensive written report of the work accomplished must be prepared and approved. Before credit is given an examination may also be required. Prerequisite: Department Head Approval

### **SURV 2734 APPLIED SURVEY COMPUTATIONS**

The use of applied statistics in land surveying, error propagation in polygon and link traverses, discussion of positional tolerance and an introduction to least square adjustments and computer applications. Prerequisites: SURV 2232, SURV 2643

### **SURV 2743 FUNDAMENTALS OF GPS**

Fundamentals of GPS, geodesy, project planning, field procedures, post processing of data, network adjustments and real time kinematic techniques. Prerequisite: SURV 2614



## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **SURV 2773 FUNDAMENTALS OF SURVEYING EXAM REVIEW**

This course is designed to help a student prepare for taking the FS exam. Topics will include the NCEES exam syllabus, basic surveying and mapping concepts, surveying computations and field techniques, applications of surveying, boundary law, and subdivision of land. Prerequisite: Department Head Approval

### **SURV 2783 CAPSTONE**

A final semester course designed to integrate all previous coursework into one final project. The student will perform records research, field work, boundary analysis, and CAD work to submit a final survey that meets minimum technical standards. Prerequisites: Advisor Approval

## **TECHNICAL SPANISH/ TRANSLATION AND INTERPRETATION**

### **TSTI 1113 INTRODUCTION TO INTERPRETING**

Introduction and practice of the basic building blocks of interpreting – analyzing, summarizing and paraphrasing, listening comprehension, shadowing, including basic strategies for short consecutive interpreting and sight translation. Prerequisite: SPAN 2143 or Department Head Approval

### **TSTI 1123 INTRODUCTION TO TRANSLATION**

The theory and practice of translation, including general background regarding human language and language families and the history of translating, as well as basic strategies for understanding and rendering written text from Spanish to English and English to Spanish. Prerequisite: SPAN 2143 or Department Approval

### **TSTI 1133 FUNDAMENTALS OF TRANSLATION**

Students will complete a series of increasingly complex and challenging translation exercises in a variety of styles. The course also offers a practical review of English and Spanish writing and editing skills necessary to produce clear, polished translations. Prerequisite: TSTI 1123

### **TSTI 1143 FUNDAMENTALS OF INTERPRETATION – CONSECUTIVE AND SIMULTANEOUS**

A practical course aimed at developing proficiency in interpreting in a variety of settings. Students develop techniques for consecutive interpreting and are introduced to basic techniques for simultaneous interpreting. Topics include memory development, note-taking, and assessment of interpreter performance. Prerequisite: TSTI 1113

### **TSTI 1213 ETHICS AND BUSINESS PRACTICES**

The role of the interpreter in business, conference, health care, legal and law enforcement settings; and standards of business practice and legal issues in translation and interpreting. This course also covers how to market translation and interpreting services and how to set up a business as a freelance translator or interpreter. Prerequisite: [R] [W]

### **TSTI 1223 TECHNOLOGY FOR TRANSLATORS AND INTERPRETERS**

Instruction in areas such as electronic editing, proofing tools and use of computers, email and the Internet to help students improve productivity and consistency. Students are also introduced to localization and translation memory tools. Prerequisite: TSTI 1113

### **TSTI 1233 VOCABULARY ACQUISITION AND TERMINOLOGY RESEARCH**

Development of general vocabulary in English and Spanish, as well as skills in terminology research, dictionary usage and glossary building. Basic Terminology and resources in fields such as medicine, law, computers, business and international trade are covered. Prerequisite: SPAN 2143

### **TSTI 2050 (1-3) SPECIAL TOPICS IN SPANISH**

Variable credit course of one to three hours. Examines issues within the field of Spanish language, literature, culture, or linguistics. This course may be cross listed with other courses in another discipline. Can be repeated for credit with different topic. Some courses may require Spanish language fluency.

## Course Descriptions

*Courses that have asterisks (\*) meet computer literacy requirements.*

### **TSTI 2113 COURT PROCEDURES**

Examination of the procedures and protocol of different settings where interpreting occurs at the federal, state, county and municipal levels. Includes explanations of the judicial and quasi-judicial systems operating in the state of Oklahoma.

Prerequisites: TSTI 1113, TSTI 1123

### **TSTI 2123 FUNDAMENTALS OF COURT INTERPRETING**

An introduction to the profession of court interpreting. Students are given an overview of the U.S. justice system, English legal language, criminal and civil procedure. The court interpreter's code of ethics is presented; and students engage in role-playing activities to illustrate the basic tenets of the code. Prerequisite: TSTI 2113

### **TSTI 2133 INTERPRETING IN LEGAL SETTINGS**

Legal interpreting in contexts such as courtrooms, attorney offices and law enforcement settings. Attention is given to the registers of speech encountered in typical legal proceedings. Prerequisite: TSTI 2123

### **TSTI 2213 INTERPRETING IN HEALTH CARE SETTINGS**

The art and skills of health care interpreting and the role, responsibilities and boundaries of the interpreter seen as an active team player in the triadic medical interview (provider-patient-interpreter). The course also presents the interpreter's role as linguistic and cultural mediator in multidisciplinary settings. Because of the medical setting students will be required to obtain a background check and certain immunizations. Please contact the program director for further information. Prerequisite: TSTI 1113

### **TSTI 2223 MEDICAL INTERPRETING I: MEDICAL TERMINOLOGY**

Introduces prefixes, suffixes and word roots used in the language of medicine. Topics include Spanish and English medical vocabulary and terms that relate to pathological conditions and the treatment of selected systems. Prerequisite: SPAN 2143

### **TSTI 2233 MEDICAL INTERPRETING II: ANATOMY AND PHYSIOLOGY**

The second in a series of medical terminology courses. Emphasis on Spanish and English medical vocabulary and terms that relate to anatomy and physiology. Prerequisite: TSTI 2223

### **TSTI 2411 PRACTICUM**

The internship links students to a practical work setting in a law firm, hospital, business or community organization. This internship will provide valuable work experience as a legal, medical, business or community interpreter and/or translator receiving close supervision or mentoring within an organization. Students should complete all Technical Occupational Specialty courses before beginning the practicum. A background check and/or certain immunizations may be needed. Please check with the program director for further information. Prerequisite: Department Head Approval

### **TSTI 2413 ADVANCED PRACTICUM**

Advanced experience in interpreting, translation, or language access services in a practical work setting in a hospital/clinic, law firm, business, or community organization. Experiences will include observation, shadowing, and practice under direct and indirect supervision. Prerequisites: Department Head Approval

### **TSTI 2450 (1-6) LANGUAGE IMMERSION**

Intensive language and culture study in an approved setting in Spain or Latin America. Study may be arranged through a college or university offering study abroad programs for college credit. Study may also be arranged directly with a school or language center in Spain or Latin America or through an agency in the United States or overseas that offers study abroad opportunities. Study abroad arrangements must be approved in advance. May be repeated for a maximum of six credit hours. Prerequisite: SPAN 2143

## **VETERINARY TECHNOLOGY**

This is a selective admission program. See department for details.

### **VT 1012 VETERINARY MEDICAL TERMINOLOGY**

Guides students through the process of reading, pronouncing, and comprehending medical terminology used in the veterinary medical field. The concept of breaking down medical terms into their roots, prefixes and suffixes is introduced and practiced, allowing the student to understand basic medical concepts and apply critical thinking skills in determining

## Course Descriptions

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the meaning of unknown medical terms. Terminology related to each of the body systems, anatomical directional terms, common diseases, and diagnostics are discussed. Prerequisite: [R]

### **VT 1112 BREEDS, RESTRAINT AND FIRST AID**

Introduces students to the scope of a veterinary technician's duties, career opportunities, and both state and federal laws, rules and regulations that govern technicians. Provides students the opportunity to identify breeds and their characteristics and demonstrate appropriate restraint and care of common domestic species including dogs, cats, horses, cattle, swine, and small ruminants. Students also begin to develop skills in ethics, professional conduct, sanitation procedures, physical examinations, medication administration, first aid procedures, and maintaining medical records. Lab: 2 hours per week. Prerequisites: Department Head Approval and admission to program

### **VT 1124 VETERINARY TECHNOLOGY ANATOMY**

Identifies and compares the structure and function of various domestic animal species. Hematologic concepts are introduced. Lab: 2 hours per week. Prerequisites: Department Head Approval and admission to program

### **VT 1213 LABORATORY TECHNIQUES I**

Identifies and classifies internal and external parasites with discussion of their significance within veterinary public health, epidemiology, and zoonotic potential. The clinical microbiology component of the courses identifies the most common bacteria and fungi responsible for causing clinical illness in veterinary species, as well as identification and diagnostic methods. Blood cell identification is introduced. Lab: 2 hours per week. Prerequisites: Department Head Approval and admission to program

### **VT 1223 VETERINARY TECHNOLOGY PHYSIOLOGY**

Explores molecular, cellular, and organ system physiology in domestic animal species. Prerequisites: Department Head Approval and admission to program

### **VT 1320 (1-3) SELECTED TOPICS IN VETERINARY TECHNOLOGY**

Study and/or analysis of a selected topic in Veterinary Technology. Credit varies from 1-3 hours. May be repeated with a different topic for up to a total of six hours credit. Prerequisites: Department Head Approval and admission to program

### **VT 1403 ANIMAL REPRODUCTION, NUTRITION AND PRODUCTION**

Investigates genetics, reproduction and breeding soundness examination of common domestic animals. Also explores principles of nutrition, nutrient requirements of domestic animals, pet food production, feeding management throughout an animal's life and the dietary management of nutritional responsive diseases or disorders. Both facets of the course relate to production. Prerequisites: Department Head Approval and admission to program

### **VT 1423 LABORATORY TECHNIQUES II**

Students perform hematologic tests, blood chemistries, urinalysis, coagulation tests, ELISA tests, blood typing, and aspiration techniques for cytological exam to aid in evaluating and interpreting bodily functions. Lab: 2 hours per week. Prerequisites: Department Head Approval and admission to program

### **VT 2114 CLINICS AND NURSING**

Introduction to the surgical environment and all aspects related to the principles of surgical and anesthetic techniques, asepsis and the practice of sterile technique. Students will identify instruments used in veterinary surgery; demonstrate proper operating room etiquette and the use of sterile technique; perform pre-anesthesia evaluation, administer and monitor anesthesia and provide post-anesthesia care; recognize and respond appropriately to anesthetic emergencies; and assist with routine surgical and obstetrical procedures. Lab: 4 hours per week. Prerequisites: Department Head Approval and admission to program

### **VT 2213 WILD, ZOO AND LABORATORY ANIMAL CARE**

Explores breed identification, restraint, husbandry, nursing care, and management of wild, zoo and laboratory animals. Also investigates the legal, ethical and safety issues concerning these animals. Lab: 2 hours per week. Prerequisites: Department Head Approval and admission to program

### **VT 2223 VETERINARY TECHNOLOGY RADIOLOGY**

Introduces various aspects of radiology, including analog and digital x-ray machines, patient positioning, exposure, developing techniques, contrast radiography and troubleshooting. Exposure to ultrasonography, dental radiography,

## Course Descriptions

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fluoroscopy, and nuclear imaging is also included. Proper safety and technique are emphasized throughout the course. Lab: 2 hours per week. Prerequisites: Department Head Approval and admission to program

### **VT 2233 VETERINARY TECHNOLOGY PHARMACOLOGY**

Introduces pharmacy management, pharmacokinetics, principles and methods of drug administration, and pharmacologic agents. Specific drugs, their classification, mode of action, indications, contraindications, adverse effects, and therapeutic applications will be presented for each body system. Prerequisites: Department Head Approval and admission to program

### **VT 2250 (1-3) SELECTED TOPICS IN VETERINARY TECHNOLOGY**

Study and/or analysis of a selected topic in Veterinary Technology. Credit varies from 1-3 hours. May be repeated with a different topic for up to a total of six hours credit. Prerequisites: Department Head Approval and admission to program

### **VT 2402 VETERINARY CLINIC MANAGEMENT**

A continuation of the scope of a veterinary technician's duties. Basic veterinary medical office procedures, staff and client relations, the human-animal bond, OSHA regulations, ethics, and professional conduct are reviewed. Prerequisites: Department Head Approval and admission to program

### **VT 2413 ANIMAL PATHOLOGY**

A comprehensive overview of general pathology including immunology, toxicology and common diseases of domestic animals. Zoonotic implications and preventative measures of diseases are discussed. Prerequisites: Department Head Approval and admission to program

### **VT 2442 VETERINARY TECHNOLOGY BOARD EXAM REVIEW**

Prepares students for state and national board exams. Prerequisites: Department Head Approval

### **VT 2504 ADVANCED CLINICS AND NURSING**

Provides continued instruction in sterile procedures, medical records, nursing procedures, dental prophylaxis, surgical prepping and assisting, dosage calculation and anesthesia administration as they pertain to small animals, horses, and ruminants. Lab: 4 hours per week. Prerequisites: Department Head Approval and admission to program

### **VT 2514 PRECEPTORSHIP**

A minimum of 256 hours of occupational experience provided through a cooperative agreement between the student, the University, and an approved veterinary medical practice. Prerequisites: Department Head Approval and admission to program