

## Course Descriptions

### Accounting (ACC)

#### ACC 116 Hospitality Accounting (3 Cr.)

Applies accounting principles and practices to the hospitality industry. Studies the accounting cycle of recording, summarizing, and reporting financial information. Analyzes information from the viewpoint of the hospitality industry manager. Lecture 3 hours per week. Generally offered fall.

#### ACC 211 Principles of Accounting I (3 Cr.)

Introduces accounting principles with respect to financial reporting. Demonstrates how decision makers use accounting information for reporting purposes. Focuses on the preparation of accounting information and its use in the operation of organizations. Lecture 3 hours per week. Generally offered all semesters.

#### ACC 212 Principles of Accounting II (3 Cr.)

Introduces accounting principles with respect to cost and managerial accounting. Focuses on the application of accounting information with respect to product costing, as well as its use within the organization to provide direction and to judge performance. *Prerequisite:* ACC 211. Lecture 3 hours per week. Generally offered all semesters.

#### ACC 215 Computerized Accounting (3 Cr.)

Introduces the computer in solving accounting problems. Focuses on operation of computers. Presents the accounting cycle and financial statement preparation in a computerized system and other applications for financial and managerial accounting. *Prerequisite:* ACC 211. Lecture 3 hours per week. Generally offered spring.

#### ACC 221 Intermediate Accounting I (3 Cr.)

Covers accounting principles and theory, including a review of the accounting cycle and accounting for current assets, current liabilities and investments. Introduces various accounting approaches and demonstrates the effect of these approaches on the financial statement users. *Prerequisite:* ACC 212 or equivalent. Lecture 3 hours per week. Generally offered fall.

#### ACC 222 Intermediate Accounting II (3 Cr.)

Continues accounting principles and theory with emphasis on accounting for fixed assets, intangibles, corporate capital structure, long-term liabilities and investments. *Prerequisite:* ACC 221 or equivalent. Lecture 3 hours per week. Generally offered spring.

#### ACC 225 Managerial Accounting (3 Cr.)

Presents the preparation, analysis and interpretation of accounting data for managerial decision-making. Includes cost control, capital budgeting and pricing decisions. *Prerequisite:* ACC 212 or equivalent. Lecture 3 hours per week. Generally offered spring.

#### ACC 231 Cost Accounting I (3 Cr.)

Studies cost accounting and reporting as applied to job order, process and standard cost accounting systems. Includes cost control and other topics. *Prerequisite:* ACC 212 or equivalent. Lecture 3 hours per week. Generally offered fall.

#### ACC 261 Principles of Federal Taxation I (3 Cr.)

Presents the study of federal taxation as it relates to individuals and related entities. Includes tax planning, compliance and reporting. Lecture 3 hours per week. Generally offered fall.

#### ACC 262 Principles of Federal Taxation II (3 Cr.)

Presents the study of federal taxation as it is related to partnerships, corporations and other tax entities. Includes tax planning, compliance and reporting. Lecture 3 hours per week. Generally offered spring.

#### ACC 298 Seminar and Project (1-5 Cr.)

Requires completion of a project or research report related to the student's occupational objectives and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours. Generally offered spring.

### Administration of Justice (ADJ)

#### ADJ 100 Survey of Criminal Justice (3 Cr.)

Presents an overview of the United States criminal justice system; introduces the major system components--law enforcement, judiciary, and corrections. Lecture 3 hours per week. Generally offered fall and spring.

#### ADJ 105 The Juvenile Justice System (3 Cr.)

Presents the evolution, philosophy, structures and processes of the American juvenile delinquency system; surveys the right of juveniles, dispositional alternatives, rehabilitation methods and current trends. *Prerequisite:* Readiness to enroll in ENG 111. Lecture 3 hours per week. Generally offered spring.

#### ADJ 107 Survey of Criminology (3 Cr.)

Surveys the volume and scope of crime; considers a variety of theories developed to explain the causation of crime and criminality. *Prerequisite:* Readiness to enroll in ENG 111. Lecture 3 hours per week. Generally offered fall and spring.

## Course Descriptions

### **ADJ 120 Introduction to Courts (3 Cr.)**

Presents an overview of the American judiciary--the federal and 50 state judicial systems--with emphasis on criminal court structures, functions, and personnel; surveys the judicial system in Commonwealth of Virginia. Lecture 3 hours per week. Offered Periodically.

### **ADJ 133 Ethics and the Criminal Justice Professional (3 Cr.)**

Examines ethical dilemmas pertaining to the criminal justice system, including those in policing, courts and corrections. Focuses on some of the specific ethical choices that must be made by the criminal justice professional. Lecture 3 hours per week. Offered Periodically.

### **ADJ 140 Introduction to Corrections (3 Cr.)**

Focuses on societal responses to the offender. Traces the evolution of practices based on philosophies of retribution, deterrence and rehabilitation. Reviews contemporary correctional activities and their relationships to other aspects of the criminal justice system. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered spring.

### **ADJ 145 Corrections and the Community (3 Cr.)**

Studies and evaluates the relationships and interactions between correctional organizations and free society. Focuses on the shared responsibility of the community and corrections agencies to develop effective programs for management and treatment of criminal offenders. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **ADJ 146 Adult Correctional Institutions (3 Cr.)**

Describes the structures, functions, and goals of state and federal correctional institutions (prisons, farms, community-based units, etc.) for adult inmates. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **ADJ 161 Introduction to Computer Crime (3 Cr.)**

Provides a basic introduction to the nature of computer crimes, computer criminals, relevant law investigative techniques, and emerging trends. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **ADJ 162 Introduction to Sex Crimes (3 Cr.)**

Provides a basic introduction to sex crimes. Covers relevant law, investigative techniques, cybersex crimes and criminals, application of criminal investigative analysis, and future trends. Lecture 3 hours per week. *Prerequisite: Readiness to enroll in ENG 111.* Offered periodically.

### **ADJ 164 Case Studies in Murder/Violent Crime (3 Cr.)**

Introduces the student to the investigation of murder and other violent crimes by means of classic case studies and to the extent feasible, local case files, local case files, includes methodology, strategy and tactics, analysis, relevant law, and future trends. Covers evidentiary techniques and technologies with a primary focus on how critical thinking is applied to serious violent crime. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours were week. Offered periodically.

### **ADJ 171 Forensic Science I (4 Cr.)**

Introduces student to crime scene technology, procedures for sketching, diagramming and using casting materials. Surveys the concepts of forensic chemistry, fingerprint classification/identification and latent techniques, drug identification, hair and fiber evidence, death investigation techniques, thin-layer chromatographic methods, and arson materials examination. Part I of II. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Generally offered fall.

### **ADJ 172 Forensic Science II (3-4 Cr.)**

Introduces student to crime scene technology, procedures for sketching, diagramming and using casting materials. Surveys the concepts of forensic chemistry, fingerprint classification/identification and latent techniques, drug identification, hair and fiber evidence, death investigation techniques, thin-layer chromatographic methods, and arson materials examination. Part II of II. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Generally offered spring.

### **ADJ 195 Topics In (1-5 Cr.)**

Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. *Prerequisite: Readiness to enroll in ENG 111.* Variable hours.

### **ADJ 232 Domestic Violence (3 Cr.)**

Surveys historical issues that have affected family violence. Examines current trends in the context of the criminal justice system. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically in spring.

### **ADJ 247 Criminal Behavior (3 Cr.)**

Introduces and evaluates the concepts of normal and abnormal behavior. Focuses on the psychological and sociological aspects of criminal and other deviant behavior patterns. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically in spring.

## Course Descriptions

### **ADJ 248 Probation, Parole, and Treatment (3 Cr.)**

Surveys the philosophy, history, organization, personnel and functioning of traditional and innovative probation and parole programs; considers major treatment models for clients. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered spring.

### **Administrative Support Technology (AST)**

#### **AST 101 Keyboarding I (3 Cr.)**

Teaches the alpha/numeric keyboard with emphasis on correct techniques, speed and accuracy. Teaches formatting of basic personal and business correspondence, reports and tabulation. *Prerequisite: Placement into ENF2 or higher or successful completion of ENF1.* Lecture 3 hours per week. Generally offered all semesters.

#### **AST 102 Keyboarding II (3 Cr.)**

Develops keyboarding and document production skills with emphasis on preparation of specialized business documents. Continues skill building for speed and accuracy. *Prerequisites: Placement into ENF2 or higher or successful completion of ENF1 and AST 101 or instructor permission.* Lecture 3 hours per week. Generally offered all semesters.

#### **AST 107 Editing/Proofreading Skills (3 Cr.)**

Develops skills essential to creating and editing business documents. Covers grammar, spelling, diction, punctuation, capitalization and other usage problems. *Prerequisites: Placement into ENF2 or higher or successful completion of ENF1 and AST 101, AST 102 or AST 141.* Lecture 3 hours per week. Generally offered fall.

#### **AST 117 Keyboarding for Computer Usage (1 Cr.)**

Teaches the alphabetic keyboard and 10-key pad. Develops correct keying techniques. Lecture 1 hour per week. Generally offered all semesters.

#### **AST 141 Word Processing I (3 Cr.)**

Teaches creating and editing documents, including line and page layouts, columns, fonts, search/replace, cut/paste, spell/thesaurus and advanced editing and formatting features of word processing software. *Prerequisites: Placement into ENF2 or higher or successful completion of ENF1 and AST 101 or AST 102.* Lecture 3 hours per week. Generally offered summer and fall.

#### **AST 142 Word Processing II (3 Cr.)**

Teaches advanced software applications. *Prerequisites: Placement into ENF 2 or higher or successful completion of ENF 1 and AST 102 or AST 141.* Lecture 3 hours per week. Generally offered spring.

#### **AST 205 Business Communications (3 Cr.)**

Teaches techniques of oral and written communications. Emphasizes writing and presenting business-related materials. *Prerequisites: Placement into ENF2 or higher or successful completion of ENF1 and AST 102, AST 141 or AST 142.* Lecture 3 hours per week. Generally offered fall

#### **AST 206 Professional Development (3 Cr.)**

Develops professional awareness in handling business and social situations. Emphasizes goal setting, critical thinking, decision-making and employment skills. *Prerequisites: Readiness to enroll in ENF 2 or above and AST 102, AST 141 or AST 142.* Lecture 3 hours per week. Generally offered spring and summer.

#### **AST 215 Medical Keyboarding (3 Cr.)**

Develops decision-making skills, speed and accuracy in preparation of medical documents with emphasis on meeting office requirements. *Prerequisites: Placement into ENF2 or higher or successful completion of ENF1 and AST 102.* Lecture 3 hours per week. Occasionally offered summer.

#### **AST 230 Introduction to Office Technology (3 Cr.)**

Introduces principles, methods and techniques involved in office technology. Emphasizes word processing, microcomputer equipment and software. *Prerequisites: Placement into ENF 2 or higher or successful completion of ENF1 and AST 102, AST 141 or AST 142.* Lecture 3 hours per week. Generally offered spring.

#### **AST 232 Microcomputer Office Applications (3 Cr.)**

Teaches production of business documents using word processing, databases and spreadsheets. Emphasizes document production to meet business and industry standards. *Prerequisites: Placement into ENF 2 or higher or successful completion of ENF1 and AST 101, AST 102, AST 141 or AST 142.* Lecture 3 hours per week. Occasionally offered summer.

#### **AST 234 Records and Database Management (3 Cr.)**

Teaches filing and records management procedures using microcomputer database software. Incorporates both manual and electronic methods for managing information. *Prerequisites: Placement into ENF2 or higher or successful completion of ENF1 and AST 101, AST 102, AST 141 or AST 142.* Lecture 3 hours per week. Generally offered fall.

#### **AST 236 Specialized Software Applications (3 Cr.)**

Teaches specialized integrated software applications on the microcomputer. Emphasizes document production to meet business and industry standards. *Prerequisites: Placement into ENF2 or higher or successful completion of ENF1 and AST 101, AST 102, AST 141 or AST 142.* Lecture 3 hours per week. Generally offered summer.

## Course Descriptions

### **AST 243 Office Administration I (3 Cr.)**

Develops an understanding of the administrative support role and the skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes the development of critical-thinking, problem-solving and job performance skills in a business office environment. *Prerequisites:* Placement into ENF2 or higher or successful completion of ENF1 and AST 101, AST 102, AST 141 or AST 142. Lecture 3 hours per week. Generally offered fall.

### **AST 244 Office Administration II (3 Cr.)**

Enhances skills necessary to provide organizational and technical support in a contemporary office setting. Emphasizes administrative and supervisory role of the office professional. Includes travel and meeting planning, office budgeting and financial procedures, international issues and career development. *Prerequisites:* Placement into ENF2 or higher or successful completion of ENF1 and AST 243, AST 102, AST 141 or AST 142. Lecture 3 hours per week. Generally offered spring.

### **AST 245 Medical Machine Transcription (3 Cr.)**

Develops machine transcription skills, integrating operation of transcribing equipment with understanding of medical terminology. Emphasizes dictation techniques and accurate transcription of medical documents in prescribed formats. *Prerequisites:* Placement into ENF2 or higher or successful completion of ENF1; AST 102 or AST 141 or AST 142; BIO 141 & 142 or BIO 145; HIM 111. Recommend HIM 112 but may enroll concurrently with AST 245. Lecture 3 hours per week. Occasionally offered spring.

### **AST 253 Advanced Desktop Publishing I (3 Cr.)**

Introduces specific desktop publishing software. Teaches document layout and design, fonts, typestyles, style sheets and graphics. *Prerequisites:* Placement into ENF2 or higher or successful completion of ENF1 and AST 101, AST 102 or AST 141. Lecture 3 hours per week. Generally offered fall.

### **AST 254 Advanced Desktop Publishing II (3 Cr.)**

Presents advanced features of desktop publishing software, culminating in the layout and design of complex multi-page documents. *Prerequisites:* Placement into ENF2 or higher or successful completion of ENF1 and AST 253. Lecture 3 hours per week. Generally offered spring.

### **AST 257 WP Desktop Publishing (3 Cr.)**

Uses word processing software to teach advanced document preparation. *Prerequisites:* Placement into ENF2 or higher or successful completion of ENF1 and AST 101, AST 102 or AST 141. Lecture 3 hours per week. Generally offered fall.

### **AST 260 Presentation Software (3 Cr.)**

Teaches creation of slides including use of text, clip art and graphs. Includes techniques for enhancing presentations with on-screen slide shows as well as printing to transparencies and handouts. Incorporates use of sound and video clips *Prerequisite:* Placement into ENF2 or higher or successful completion of ENF1 and AST 102 or AST 141. Lecture 3 hours per week. Generally offered spring.

### **AST 265 Legal Office Procedures I (3 Cr.)**

Introduces general office procedures used in law offices and courts *Prerequisites:* Placement into ENF2 or higher or successful completion of ENF1 and AST 102 or AST 141. Lecture 3 hours per week. Occasionally offered summer.

### **AST 266 Legal Office Procedures II (3 Cr.)**

Develops skills necessary to provide organizational and technical support in a legal setting. Emphasizes administrative and supervisory duties *Prerequisites:* Placement into ENF2 or higher or successful completion of ENF1 and AST 265. Lecture 3 hours per week. Occasionally offered summer.

### **AST 271 Medical Office Procedures I (3 Cr.)**

Covers medical office procedures, records management, preparation of medical reports, and other medical documents. *Prerequisite:* Placement into ENF2 or higher or successful completion of ENF1 and AST 102 or AST 141. Lecture 3 hours per week. Occasionally offered summer.

## **Agriculture (AGR)**

### **AGR 141 Introduction to Animal Science and Technology (4 Cr.)**

Introduces the science and technology involved in sustainable animal production and management practices. Includes beef, sheep, horses, dairy, swine, goats, and poultry, with emphasis on practical experiences in laboratory and farm settings. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week. Generally offered fall.

### **AGR 142 Introduction to Plant Science and Technology (3 Cr.)**

Introduces students to plant science, ecology, plant morphology, plant and soil relations and energy conversions. Includes surveying agricultural crops and their importance in the economy. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered spring.

## Course Descriptions

### **AGR 143 Introduction to Agribusiness and Financial Management (3 Cr.)**

Introduces agriculture's importance to society and ways to start a farm or agribusiness. Evaluates forms of business including cooperatives and create financial statements and reports necessary for routine accounting and tax preparation. Utilizes financial tools for decision making, budgets and time value of money. Explores retirement, transition planning, personal financial management, and capital acquisition techniques. Generally offered fall.

### **Air Conditioning and Refrigeration (AIR)**

#### **AIR 121 Air Conditioning and Refrigeration I (3 Cr.)**

Studies refrigeration theory, tools and equipment, soldering, brazing, refrigeration systems, system components, compressors, evaporators, metering devices. Provides laboratory application of refrigerators and freezers. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered fall.

#### **AIR 122 Air Conditioning and Refrigeration II (3 Cr.)**

Studies refrigeration theory, tools and equipment, soldering, brazing, refrigeration systems, system components, compressors, evaporators, metering devices. Provides laboratory application of refrigerators and freezers. *Prerequisite* AIR 121. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered spring.

#### **AIR 134 Circuit and Controls I (3 Cr.)**

Presents circuit diagrams for air conditioning units, reading and drawing of circuit diagrams, types of electrical controls. Includes analysis of air conditioning circuits, components, analysis and characteristics of circuits and controls, testing and servicing, introduces electricity for air conditioning which includes circuit elements, direct current circuits and motors, single and three-phase circuits and motors, power distribution systems and protective devices. Studies the electron and its behavior in passive and active circuits and components. Demonstrates electronic components and circuits as applied to air conditioning system. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered fall.

#### **AIR 154 Heating Systems I (3 Cr.)**

Introduces types of fuels and their characteristics of combustion; types, components and characteristics of burners and burner efficiency analyzers. Studies forced air heating systems including troubleshooting, preventive maintenance and servicing. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered fall.

#### **AIR 155 Heating Systems II (3 Cr.)**

Introduces types of fuels and their characteristics of combustion; types, components and characteristics of burners and burner efficiency analyzers. Studies forced air heating systems including troubleshooting, preventive maintenance and servicing. *Prerequisite:* AIR 154. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered spring.

### **American Sign Language (ASL)**

#### **ASL 101-102 American Sign Language I-II (3 Cr.) (3 Cr.)**

Introduces the fundamentals of American Sign Language (ASL) used by the Deaf Community, including basic vocabulary, syntax, finger spelling and grammatical non manual signals. Focuses on communicative competence. Develops gestural skills as a foundation for ASL enhancement. Introduces cultural knowledge and increases understanding of the Deaf Community. Lecture 3-4 hours. Laboratory 0-2 hours. Total 3-5 hours per week. ASL 101 Generally offered fall; ASL 102 Generally offered spring.

#### **ASL 115 Finger Spelling and Number Use in ASL (2 Cr.)**

Provides intensive practice in comprehension and production of finger spelled words and numbers with emphasis on clarity and accuracy. Focuses on lexicalized finger spelling and numeral incorporation as used by native users of American Sign Language. *Prerequisite* ASL 101 or *permission of instructor*. Lecture 2 hours per week. Offered periodically.

#### **ASL 125 History and Culture of the Deaf Community I (3 Cr.)**

Presents an overview of various aspects of deaf culture, including educational and legal issues. *Prerequisite:* ENG 111. Lecture 3 hours per week. Offered periodically.

#### **ASL 150 Working with Deaf and Hard-of-Hearing People (2 Cr.)**

Explores career options for serving Deaf/hard-of-hearing people and/or for using American Sign Language skills in a career. Examines interests, skills, and educational assessments. Investigates job market viability via the Internet and professional periodicals. Develops opportunities for students to network with professionals in the field of deafness. Lecture 2 hours per week. Offered periodically.

## Course Descriptions

### **ASL 201-202 American Sign Language III-IV (3 Cr.) (3 Cr.)**

Develops vocabulary, conversational competence and grammatical knowledge with a total immersion approach. Introduces increasingly complex grammatical aspects including those unique to ASL. Discusses culture and literature. Contact with the deaf community is encouraged to enhance linguistic and cultural knowledge. Lecture 3-4 hours per week. Laboratory 0-2 hours per week. Total 3-5 hours per week. ASL 201 Generally offered fall; ASL 202 Generally offered spring.

### **ASL 210 ASL Storytelling (3 Cr.)**

Focuses on the elements of storytelling in American Sign Language and the techniques that deaf individuals utilize to pass on the histories and traditions of the deaf community. Emphasizes comprehension and production of short stories in American Sign Language with emphasis on sign production clarity and conceptual accuracy. Lecture 3 hours per week. Offered periodically.

### **ASL 220 Comparative Linguistics: ASL & English (3 Cr.)**

Describes spoken English and ASL (American Sign Language) on five levels: phonological, morphological, lexical, syntactic, and discourse. Compares and contrasts the two languages on all five levels using real-world examples. Documents similarities between signed languages and spoken languages in general. Describes the major linguistic components and processes of English and ASL. Introduces basic theories regarding ASL structure. Emphasizes ASL's status as a natural language by comparing and contrasting similarities and unique differences between the two languages. *Prerequisite: ASL 201.* Lecture 3 hours per week. Generally offered spring.

### **ASL 261 American Sign Language V (3 Cr.)**

Develops advanced American Sign Language comprehension and production skills. Emphasizes advanced linguistic aspects of ASL. Presents ASL literary forms. Encourages contact with the Deaf Community. *Prerequisite: ASL 202.* Part I of II. Lecture 3 hours per week.

### **ASL 262 American Sign Language VI (3 Cr.)**

Develops advanced American Sign Language comprehension and production skills. Emphasizes advanced linguistic aspects of ASL. Presents ASL literary forms. Encourages contact with the Deaf Community. *Prerequisite: ASL 202.* Part II of II. Lecture 3 hours per week.

## **Architecture (ARC)**

### **ARC 130 Introduction to Materials and Methods of Construction (3 Cr.)**

Introduces the physical properties and characteristics of building materials and methods of construction. Includes review of residential and light commercial wood-frame construction techniques and an introduction to steel and concrete structural systems. Lecture 3 hours per week. Generally offered fall.

### **ARC 221 Architectural CAD Applications Software I (3 Cr.)**

Teaches the principles and techniques of architectural drawing practices through the use of architecture specific CAD software. Utilizes the commands and features of the software to generate drawings that emphasize architectural design and structural systems. *Requires knowledge of AutoCAD 2D software.* Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered spring.

### **ARC 222 Architectural CAD Applications Software II (3 Cr.)**

Uses advanced features of architectural CAD software to teach students to develop working drawings and details that adhere to the practices and techniques of architectural drawing principles. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered fall.

### **ARC 240 Designing Sustainable Built Environments (3 Cr.)**

Introduces students to ethics, ideas, technologies, methods and current practices in designing sustainable environments. Lecture 3 hours per week. Generally offered spring.

## **Art (ART)**

### **ART 100 Art Appreciation (3 Cr.)**

Introduces art from prehistoric times to the present day. Describes architectural styles, sculpture, photography, printmaking, and painting techniques. Lecture 3 hours per week. Offered periodically.

### **ART 101-102 History and Appreciation of Art I-II (3 Cr.) (3 Cr.)**

Presents the history and interpretation of architecture, sculpture and painting. Begins with prehistoric art and follows the development of western civilization to the present. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

## Course Descriptions

### **ART 103 History of Far Eastern Art I (3 Cr.)**

Surveys the history of Far Eastern art from the prehistoric period to the present. Part I focuses on the art of India and Southeast Asia. Part II focuses on the art of China, Japan, and Korea. Emphasizes architecture, painting and sculpture with some instruction in printmaking and decorative arts. Lecture 3 hours per week. Offered periodically.

### **ART 114 General Art (3 Cr.)**

Introduces art to the student without previous training. Provides studio exercises in drawing, painting, and two- and three-dimensional design. Lecture 2 hours. Laboratory 3 hours. Total 5 hours per week. Generally offered fall and spring.

### **ART 121-122 Drawing I-II (3 Cr.) (3 Cr.)**

Develops basic drawing skills and understanding of visual language through studio instruction/lecture. Introduces concepts such as proportion, space, perspective, tone and composition as applied to still life, landscape and the figure. Uses drawing media such as pencil, charcoal, ink wash and color media. Includes field trips and gallery assignments as appropriate. *ART 121 is prerequisite for ART 122.* Lecture 2 hours per week. Studio instruction 4 hours per week. Total 5 hours per week. Generally offered all semesters.

### **ART 131-132 Fundamentals of Design I-II (4 Cr.) (4 Cr.)**

Explores the concepts of two- and three-dimensional design and color. May include field trips as required. *Art 131 is a prerequisite for ART 132.* Lecture 2 hours per week. Studio instruction 4 hours per week. Total 6 hours per week. Generally offered fall and spring.

### **ART 138 Figure Drawing (3 Cr.)**

Develops drawing skills for the beginning and experienced students. Explores a broad range of drawing problems dealing with the human figure in costume using various media and techniques. *Prerequisite: ART 121 or divisional approval.* Lecture 2 hours per week. Studio instruction 3 hours per week. Total 5 hours per week. Offered periodically.

### **ART 153-154 Ceramics I-II (3 Cr.) (3 Cr.)**

Presents problems in the design and production of functional and non-functional ceramic works. Includes hand building the potter's wheel and clays and glazes. Lecture 2 hours per week. Studio instruction 4 hours per week. Total 6 hours per week. Generally offered fall and spring.

### **ART 235 Functional Ceramics (3 Cr.)**

Explores the design and production of functional ceramics, including hand building and use of the wheel. *Prerequisite: ART 154 or instructor approval.* Lecture 2 hours per week. Studio instruction 4 hours per week. Total 6 hours per week. Offered periodically.

### **ART 236 Sculptural Ceramics (3 Cr.)**

Explores the design and production of sculptural ceramics, including hand building and use of the wheel. *Prerequisite: ART 154 or instructor approval.* Lecture 2 hours per week. Studio instruction 4 hours per week. Total 6 hours per week. Offered periodically.

### **ART 241-242 Painting I-II (3 Cr.) (3 Cr.)**

Introduces abstract and representational painting in acrylic and/or oil with emphasis on color composition and value. *Prerequisite: ART 122 or instructor approval.* Lecture 2 hours per week. Studio instruction 4 hours per week. Total 5 hours per week. Offered periodically.

### **ART 243-244 Watercolor I-II (3 Cr.) (3 Cr.)**

Presents abstract and representational painting in watercolor with emphasis on design, color, composition, technique and value. *Prerequisite: ART 131 or instructor approval.* Lecture 2 hours per week. Studio instruction 2 hours per week. Total 4 hours per week. Generally offered fall and spring.

### **ART 271-272 Printmaking I-II (3 Cr.) (3 Cr.)**

Introduces the student to the full range of printmaking techniques. Includes woodcut, silkscreen, etching and lithography. Provides historical perspective on printmaking. Lecture 2 hours per week. Studio instruction 3 hours per week. Total 5 hours per week. Offered periodically.

### **ART 283-284 Computer Graphics I-II (3 Cr.) (3 Cr.)**

Utilizes microcomputers and software to produce computer graphics. Employs techniques learned to solve studio projects which reinforce instruction and are appropriate for portfolio use. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 1 hour per week. Studio instruction 4 hours per week. Total 5 hours per week. Generally offered fall and spring.

### **ART 287 Portfolio and Resume Preparation (1-4 Cr.)**

Focuses on portfolio preparation, resume writing and job interviewing for students. Recommended for final semester program students. *Requires instructor's approval.* Lecture 1 hour. Studio instruction 0-4 hours. Total 1-6 hours per week. Generally offered fall and spring.

## Course Descriptions

### **Biology (BIO)**

#### **BIO 100 Basic Human Biology (3 Cr.)**

Presents basic principles of human anatomy and physiology. Discusses cells, tissues, and selected human systems. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

#### **BIO 101 General Biology I (4 Cr.)**

Focuses on foundations in cellular structure, metabolism, and genetics in an evolutionary context. Explores the core concepts of evolution: structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. *Prerequisites: Readiness to enroll in ENG 111, plus completion of developmental math unit 3 or placement in unit 4 or above.* Lecture 3 hours per week. Laboratory 3 hours per week. Total 6 hours per week. Generally offered fall and spring and occasionally summer.

#### **BIO 102 General Biology II (4 Cr.)**

Focuses on diversity of life, anatomy and physiology of organisms, and ecosystem organization and processes in an evolutionary context. Explores the core concepts of evolution; structure and function; information flow, storage and exchange; pathways and transformations of energy and matter; and systems biology. Emphasizes process of science, interdisciplinary approach, and relevance of biology to society. *Prerequisites: Readiness to enroll in ENG 111, plus completion of developmental math unit 3 or placement in unit 4 or above and BIO 102.* Lecture 3 hours per week. Laboratory 3 hours per week. Total 6 hours per week. Generally offered fall and spring and occasionally summer

#### **BIO 141-142 Human Anatomy and Physiology I-II (4 Cr.) (4 Cr.)**

Integrates anatomy and physiology of cells, tissues, organs and systems of the human body. Integrates concepts of chemistry, physics and pathology. *BIO 141 prerequisite to BIO 142. Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Laboratory 3 hours per week. Total 6 hours per week. Generally offered all semesters.

#### **BIO 145 Human Anatomy and Physiology for the Health Sciences (4 Cr.)**

Introduces human anatomy and physiology primarily to those planning to pursue an AAS degree in nursing. Covers basic chemical concepts, cellular physiology, as well as the anatomy and physiology of human organ systems. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3-4 hours. Laboratory 3 hours. Total 6-7 hours per week. Generally offered all semesters.

#### **BIO 150 Introductory Microbiology (4 Cr.)**

Studies the general characteristics of microorganisms. Emphasizes their relationships to individual and community health. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Recitation and laboratory 3 hours per week. Total 6 hours per week. Generally offered all semesters.

#### **BIO 206 Cell Biology (4 Cr.)**

Introduces the ultrastructure and functions of cells. Emphasizes cell metabolism, cell division, and control of gene expression. *Prerequisites: BIO 101 and CHM 111.* Lecture 3 hours. Recitation and laboratory 3 hours. Total 6 hours per week.

#### **BIO 215 Plant Life of Virginia (3 Cr.)**

Focuses on identification and ecological relationships of the native plants of Virginia. Emphasizes shrubs, vines, weeds, wildflowers, ferns, and mushrooms. Lecture 2 hours. Recitation and laboratory 3 hours. Total 5 hours per week.

#### **BIO 295 Topics In (1-5 Cr.)**

Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours. Generally offered spring.

### **Business Management and Administration (BUS)**

#### **BUS 100 Introduction to Business (3 Cr.)**

Presents a broad introduction to the functioning of business enterprise within the U.S. economic framework. Introduces economic systems, essential elements of business organization, production, human resource management, marketing, finance and risk management. Lecture 3 hours per week. Generally offered fall and spring.

#### **BUS 111 Principles of Supervision I (3 Cr.)**

Teaches the fundamentals of supervision, including the primary responsibilities of the supervisor. Introduces factors relating to the work of supervisors and subordinates. Covers aspects of leadership, job management, work improvement, training and orientation, performance evaluation and effective employee/supervisor relationships. Lecture 3 hours per week. Generally offered spring.

#### **BUS 116 Entrepreneurship (3 Cr.)**

Presents the various steps considered necessary when going into business. Includes areas such as product-service analysis, market research evaluation, setting up books, ways to finance startup, operations of the business, development of business plans, buyouts versus starting from scratch and franchising. Uses problems and cases to demonstrate implementation of these techniques. Lecture 3 hours per week. Generally offered fall.



## Course Descriptions

### **BUS 165 Small Business Management (3 Cr.)**

Identifies management concerns unique to small businesses. Introduces the requirements necessary to initiate a small business and identifies the elements compromising a business plan. Presents information establishing financial and administrative controls, developing a marketing strategy, managing business operations and the legal and government relationships specific to small businesses. Lecture 3 hours per week. Generally offered spring.

### **BUS 200 Principles of Management (3 Cr.)**

Teaches management and the management functions of planning, organizing, leading and controlling. Focuses on application of management principles to realistic situations managers encounter as they attempt to achieve organizational objectives. Lecture 3 hours per week. Generally offered spring.

### **BUS 205 Human Resource Management (3 Cr.)**

Introduces employment, selection and placement of personnel, usage levels and methods, job descriptions, training methods and programs and employee evaluation systems. Includes procedures for management of human resources and uses case studies and problems to demonstrate implementation of these techniques. Lecture 3 hours per week. Generally offered spring.

### **BUS 236 Communication in Management (3 Cr.)**

Introduces the functions of communication in management with emphasis on gathering, organizing and transmitting facts and ideas. Teaches the basic techniques of effective oral and written communication. Lecture 3 hours per week. Generally offered fall.

### **BUS 241 Business Law I (3 Cr.)**

Develops a basic understanding of the US business legal environment. Introduces property and contract law, agency and partnership liability, and government regulatory law. Students will be able to apply these legal principles to landlord/tenant disputes, consumer rights issues, employment relationships, and other business transactions. Lecture 3 hours per week. Generally offered fall.

### **BUS 242 Business Law II (3 Cr.)**

Focuses on business organization and dissolution, bankruptcy and Uniform Commercial Code. Introduces international law and the emerging fields of E-Commerce and Internet Law. Lecture 3 hours per week. Generally offered spring. Lecture 3 hours per week. Generally offered spring.

### **BUS 285 Current Issues in Management (3 Cr.)**

Designed as a capstone for management majors, the course is designed to provide an integrated perspective of current issues and trends in business management. Contemporary issues will be explored in a highly participatory class environment. Lecture 3 hours per week. Generally offered spring.

## **Chemistry (CHM)**

### **CHM 101-102 General Chemistry I-II (4 Cr.) (4 Cr.)**

Emphasizes experimental and theoretical aspects of inorganic, organic and biological chemistry. Discusses general chemistry concepts as they apply to issues within our society and environment. Designed for the non-science major. *Prerequisite: Readiness to enroll in ENG 111. Prerequisite for CHM 101 is competence in MTE 1-6. CHM 101 prerequisite to CHM 102.* Lecture 3 hours per week. Laboratory 3 hours per week. Total 6 hours per week. Generally offered all semesters.

### **CHM 110 Survey of Chemistry (3 Cr.)**

Introduces the basic concepts of general, organic and biochemistry with emphasis on their applications to other disciplines. No previous chemistry background required. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

### **CHM 111-112 College Chemistry I-II (4 Cr.) (4 Cr.)**

Explores the fundamental laws, theories and mathematical concepts of chemistry. Designed primarily for science and engineering majors. Requires a strong background in mathematics. *Prerequisite: Readiness to enroll in ENG 111. Prerequisite for CHM 111 is competence in MTE 1-9. CHM 111 prerequisite to CHM 112.* Lecture 3 hours per week. Laboratory 3 hours per week. Total 6 hours per week. Generally offered all semesters.

### **CHM 241-242 Organic Chemistry I-II (3 Cr.) (3 Cr.)**

Introduces fundamental chemistry of carbon compounds, including structures, physical properties, syntheses and typical reactions. Emphasizes reaction mechanisms. *Prerequisite: CHM 111-112. CHM 241 prerequisite to CHM 242. Recommended co-requisite: CHM 243-244.* Lecture 3 hours per week. CHM 241 Generally offered fall and spring; CHM 242 Generally offered spring.

### **CHM 245-246 Organic Chem. Lab. I-II (2 Cr.) (2 Cr.)**

Includes qualitative organic analysis. Shall be taken concurrently with CHM 241 and CHM 242. Lecture 1 hour per week. Laboratory 3 hours per week. Total 4 hours per week. CHM 245 Generally offered fall; CHM 246 Generally offered spring.

## Course Descriptions

### **CHM 260 Introductory Biochemistry (3 Cr.)**

Explores fundamentals of biological chemistry. Includes study of macromolecules, metabolic pathways, and biochemical genetics. *Prerequisite: CHM 112 or divisional approval.* Lecture 3 hours per week. Generally offered spring.

### **CHM 261 Biochemistry Lab (1 Cr.)**

Provides hands on lab experiences designed to reinforce the fundamentals of biological chemistry taught in CHM 260 such as biochemistry assays, enzyme kinetics, enzyme purification, chromatography, electrophoresis and use of western blots. Laboratory 3 hours per week. Generally offered spring.

### **Childhood Development (CHD)**

#### **CHD 118 Language Arts for Young Children (3 Cr.)**

Emphasizes the early development of children's language and literacy skills. Presents techniques and methods for supporting all aspects of early literacy. Surveys children's literature, and examines elements of promoting oral literacy, print awareness, phonological awareness, alphabetic principle, quality storytelling and story reading. Addresses strategies for intervention and support for exceptional children and English Language Learners. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered fall.

#### **CHD 119 Introduction to Reading Methods (3 Cr.)**

Focuses on promoting language and literacy skills as the foundation for emergent reading. Emphasizes phonetic awareness and alphabetic principles, print awareness and concepts, comprehension and early reading and writing. Addresses strategies for intervention and support for exceptional children and English Language Learners. NOTE: This course replaces CHD 117. *Placement test recommendation for ENG 111 required. Prerequisite: CHD 118.* Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered spring.

#### **CHD 120 Intro. to Early Childhood Education (3 Cr.)**

Introduces early childhood development through activities and experiences in early childhood, pre-kindergarten, kindergarten and primary programs. Investigates classroom organization and procedures and use of classroom time and materials, approaches to education for young children, professionalism and curricular procedures. Lecture 3 hours per week. Generally offered all semesters.

#### **CHD 145 Teaching Art, Music and Movement to Children (3 Cr.)**

Focuses on children's exploration, play, and creative expression in the areas of art, music, and movement. Emphasis will be on developing strategies for using various open-ended media representing a range of approaches in creative thinking. Addresses strategies for intervention and support for exceptional children and English Language Learners. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered fall and spring.

#### **CHD 146 Math, Science, and Social Studies for Children (3 Cr.)**

Provides experiences in content, methods, and materials for the development of math, science, and social studies skills in children. Emphasis will be on developing strategies for using various resources to facilitate children's construction of knowledge. Addresses strategies for intervention and support for children with special needs and English Language Learners. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered fall.

#### **CHD 165 Observation and Participation in Early Ch/Primary Settings (3 Cr.)**

Focuses on observation as the primary method for gathering information about children in early childhood settings. Emphasizes development of skills in the implementation of a range of observation techniques. May be taken again for credit. One hour seminar, 4 hours field placement. Total 5 hours per week. Generally offered all semesters.

#### **CHD 166 Infant and Toddler Programs (3 Cr.)**

Examines child growth and development from birth to 36 months. Focuses on development in the physical, cognitive, social, emotional, and language domains. Emphasizes the importance of the environment and relationships for healthy brain development during the child's first three years of life. Investigates regulatory standards for infant/toddler care giving. Lecture 3 hours per week. Generally offered spring.

#### **CHD 167 CDA Theories and Applications: Portfolio (2-3 Cr.)**

Supports the CDA candidate in organizing and developing a portfolio for presentation at local assessment team meeting. Lecture 2-3 hours per week. Generally offered spring.

#### **CHD 205 Guiding the Behavior of the Children (3 Cr.)**

Explores the role of the early childhood educator in supporting emotional and social development of children, and in fostering a sense of community. Presents practical strategies for encouraging prosocial behavior, conflict resolution and problem solving. Emphasizes basic skills and techniques in child guidance. Lecture 3 hours per week. Generally offered fall and spring.

## Course Descriptions

### **CHD 210 Introduction to Exceptional Children (3 Cr.)**

Reviews the history of and legal requirements for providing intervention and educational services for young children with special needs. Studies the characteristics of children with a diverse array of needs and developmental abilities. Explores concepts of early intervention, inclusion, guiding behavior and adapting environments to meet children's needs. Lecture 3 hours per week. Generally offered fall.

### **CHD 215 Models of Early Childhood Education Programs (3 Cr.)**

Studies and discusses the various models and theories of early childhood education programs including current trends and issues. Presents state licensing and staff requirements. Lecture 3 hours per week. Generally offered fall.

### **CHD 216 Early Childhood Programs, School, and Social Change (3 Cr.)**

Explores methods of developing positive, effective relations with families to enhance their developmental goals for children. Considers culture and other diverse needs, perspectives, and abilities of families and educators. Emphasizes advocacy and public policy awareness as an important role of early childhood educators. Describes risk factors and identifies community resources. Lecture 3 hours per week. Generally offered fall.

### **CHD 265 Adv. Observation and Participation, in Early Ch/Primary Settings (3 Cr.)**

Focuses on implementation of activity planning and observation of children through participation in early childhood settings. Emphasizes responsive teaching practices and assessment of children's development. Reviews legal and ethical implications of working with children. One hour seminar. 4 hours field placement. Total 5 hours per week. Students must have completed the majority of program specific courses before enrolling. Students must be eligible to work with young children according to Department of Social Services requirements. Generally offered all semesters.

### **CHD 270 Admin. of Childcare Programs (3 Cr.)**

Examines the skills needed for establishing and managing early childhood programs. Emphasizes professionalism and interpersonal skills, program planning, staff selection and development, creating policies, budgeting, and developing forms for recordkeeping. Lecture 3 hours per week. Generally offered spring.

### **CHD 298 Seminar and Project (1-5 Cr.)**

Requires completion of a project or research report related to the student's occupational objectives and a study of approaches to the selection and pursuit of career opportunities in the field. May be repeated for credit. Variable hours. Generally offered spring.

## **Civil Engineering Technology (CIV)**

### **CIV 171 Surveying I (3 Cr.)**

Introduces surveying equipment, procedures and computations including adjustment of instruments, distance measurement, leveling, angle measurement, traversing, traverse adjustments, area computations and introduction to topography. Lecture 2 hours per week. Laboratory 3 hours per week. Total 5 hours per week. Generally offered fall.

### **CIV 172 Surveying II (3 Cr.)**

Introduces surveys for transportation systems including the preparation and analysis of topographic maps, horizontal and vertical curves, earthwork and other topics related to transportation construction. *Prerequisite: CIV 171.* Lecture 2 hours per week. Laboratory 3 hours per week. Total 5 hours per week. Generally offered spring.

### **CIV 226 Soil Mechanics Laboratory (1 Cr.)**

Introduces practical soil sampling; classification of unified, ASTM and AASHTO specifications; laboratory testing of soils to predict engineering performance. Laboratory 2 hours per week. Generally offered spring.

## **Communication Studies and Theatre (CST)**

### **CST 100 Principles of Public Speaking (3 Cr.)**

Applies theory and principles of public address with emphasis on preparation and delivery. *Prerequisite: placement testing approval for ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

### **CST 110 Intro to Speech Communication (3 Cr.)**

Examines the elements affecting speech communication at the individual, small group and public communication levels with emphasis on practice of communication at each level. *Prerequisite: placement testing approval for ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

### **CST 114 Survey of Mass Media (3 Cr.)**

Examines the history and current understanding of mass communication. Covers print media (newspapers, magazines, and books), electronic media (radio, television, film, the Internet), advertising, public relations, and mass media theory, research, and ethics. Lecture 3 hours per week. Offered periodically.

## Course Descriptions

### **CST 116 Speech Workshop (1-6 Cr.)**

Enables work in competitive speech activities such as debate, oratory, impromptu speaking, prose and poetry reading and rhetorical criticism. *Prerequisite: placement testing approval for ENG 111.* May be repeated for credit. Variable hours per week. Generally offered fall and spring.

### **CST 126 Interpersonal Communication (3 Cr.)**

Teaches interpersonal communication skills for both daily living and the world of work. Includes perception, self-concept, self-disclosure, listening and feedback, nonverbal communication, attitudes, assertiveness and other interpersonal skills. Lecture 3 hours per week. Offered periodically.

### **CST 130 Intro to the Theatre (3 Cr.)**

Surveys the principles of drama, the development of theatre production and selected plays to acquaint the student with various types of theatrical presentation. Lecture 3 hours per week. Offered periodically.

### **CST 131-132 Acting I-II (3 Cr.) (3 Cr.)**

Develops personal resources and explores performance skills through such activities as theatre games, role playing, improvisation, work on basic script units and performance of scenes. Lecture 2 hours per week. Lab 3 hour per week. Total 5 hours per week. Offered periodically.

### **CST 136 Theatre Workshop (3 Cr.)**

Enables students to work in various activities of play production. The student participates in performance, set design, stage carpentry, sound, costuming, lighting, stage-managing, props, promotion, or stage crew. May be repeated for credit. Workshop 3 hours per week. Generally offered fall and spring.

### **CST 137 Oral Interpretation (3 Cr.)**

Studies the theory and practice of performing various types of literature: prose, poetry, and drama. Emphasizes the relationship among the oral interpreter, the literary work, and the audience. Lecture 3 hours per week.

### **CST 138 Communication for Allied Health Professionals (3 Cr.)**

Explores and analyzes relational concepts and behaviors of interaction in verbal and nonverbal communication in the healthcare context. Requires oral and written presentations. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered spring and summer.

### **CST 141 Theatre Appreciation I (3 Cr.)**

Aims to increase knowledge and enjoyment of theatre. Considers process, style, organization written drama, and performed drama. Part I of II. Lecture 3 hours per week. Offered periodically.

### **CST 151 Film Appreciation I (3 Cr.)**

Provides students with a critical understanding of film through the discussion and viewing of motion pictures with emphasis upon the study of film history and the forms and functions of film. Students will develop skills to analyze the shared social, cultural and historical influences of films and their contexts. Part I of II. Lecture 3 hours per week. Offered once every two years.

### **CST 160 Improvisation I (3 Cr.)**

Explores the basic techniques of improvisation through short and long form exercises and the study of the history of improvisation and improvisation theory and practices. Lecture 3 hours per week. Offered periodically.

### **CST 229 Intercultural Communication (3 Cr.)**

Emphasizes the influence of culture on the communication process including differences in values, message systems, and communication rules. Lecture 3 hours per week. Offered periodically.

## **Computer Aid Drafting and Design (CAD)**

### **CAD 165 Architectural Blueprint Reading (3 Cr.)**

Emphasizes reading, understanding and interpreting standard types of architectural drawings including plans, elevation, section and details. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered spring every other year.

### **CAD 175 Schematics and Mechanical Diagrams (2 Cr.)**

Covers interpretation of basic shop drawings, conventional symbols, common electrical and electronics symbols, wiring diagrams, hydraulic and pneumatic symbols, schematic drawings and piping diagrams. Lecture 2 hours per week. Course Generally offered fall semester. Occasionally offered summer.

### **CAD 241 Parametric Solid Modeling I (3 Cr.)**

Focuses on teaching students the design of parts by parametric solid modeling. Topics covered will include, but not limited to, sketch profiles; geometric and dimensional constraints; 3-D features; model generation by extrusion, revolution and sweep; and the creation of 2-D drawing views that include sections, details and auxiliary. Part I of II. *Requires knowledge of AutoCAD 2D software.* Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week. Generally offered spring.

## Course Descriptions

### **CAD 242 Parametric Solid Modeling II (3 Cr.)**

Focuses on teaching students the design of parts by parametric solid modeling. Topics covered will include, but not limited to, sketch profiles; geometric and dimensional constraints; 3-D features; model generation by extrusion, revolution and sweep; and the creation of 2-D drawing views that include sections, details and auxiliary. Part II of II. *Prerequisites:* CAD 241. Lecture 2-3 hours. Laboratory 2-3 hours. Total 4-6 hours per week. Generally offered fall.

### **Computer Science (CSC)**

#### **CSC 200 Introduction to Computer Science (3 Cr.)**

Provides broad introduction to computer science. Discusses architecture and function of computer hardware, including networks and operating systems, data and instruction representation and data organization. Covers software, algorithms, programming languages and software engineering. Discusses artificial intelligence and theory of computation. Includes a hand-on component. *Prerequisites:* Readiness for MTH 163 or equivalent *and* readiness to enroll in ENG 111 Lecture 3 hours per week. Generally offered spring.

### **Dental Hygiene (DNH)**

#### **DNH 111 Oral Anatomy (2 Cr.)**

Studies the morphology and function of the oral structures with emphasis on the primary and permanent dentition, eruption sequence, occlusion and intra-arch relationships. Lecture 2 hours per week. Generally offered fall.

#### **DNH 115 Histology/Head and Neck Anatomy (3 Cr.)**

Presents a study of the microscopic and macroscopic anatomy and physiology of the head, neck and oral tissues. Includes embryologic development and histologic components of the head, neck, teeth and periodontium. Lecture 3 hours per week. Generally offered fall.

#### **DNH 120 Management of Emergencies (2 Cr.)**

Studies the various medical emergencies and techniques for managing emergencies in the dental setting. Additional practical applications and simulations of emergencies may be conducted to enhance basic knowledge from the one-hour lecture component. Lecture 1-2 hours per week. Generally offered fall.

#### **DNH 130 Oral Radiography for the Dental Hygienist (3 Cr.)**

Studies radiation physics, biology, safety and exposure techniques for intra- and extra-oral radiographic surveys. Laboratory provides practice in exposure, processing methods, mounting and interpretation of normal findings. Lecture 2 hours per week. Laboratory 3 hours per week. Total 5 hours per week. Generally offered fall.

#### **DNH 141 Dental Hygiene I (5 Cr.)**

Introduces clinical knowledge and skills for the performance of dental hygiene services; basic skill components, lab manikins and client practice. Lecture 3 hours per week. Clinic 6 hours per week. Total 9 hours per week. Generally offered fall.

#### **DNH 142 Dental Hygiene II (5 Cr.)**

Exposes students to instrument sharpening, time management and client education techniques and methods. Provides supervised clinical practice in the dental hygiene clinic with emphasis on developing client treatment and instrument skills. *Prerequisite:* DNH 141. Lecture 1-2 hours per week. Clinical 9-12 hours per week. Total 11-13 hours per week. Generally offered spring.

#### **DNH 145 General and Oral Pathology (2 Cr.)**

Introduces general pathology with consideration of the common diseases affecting the human body. Particular emphasis is given to the study of pathological conditions of the mouth, teeth and their supporting structures. *Prerequisite:* DNH 113, 114, or 115. Lecture 2 hours per week. Generally offered spring.

#### **DNH 146 Periodontics for the Dental Hygienist (2 Cr.)**

Introduces the theoretical and practical study of various concepts and methods used in describing, preventing and controlling periodontal disease. Presents etiology, microbiology, diagnosis, treatment and prognosis of diseases. Lecture 2 hours per week. Generally offered spring.

#### **DNH 150 Nutrition (2 Cr.)**

Studies nutrition as it relates to dentistry and general health. Emphasizes the principles of nutrition as applied to the clinical practice of dental hygiene. Lecture 2 hours per week. Generally offered summer.

#### **DNH 190 Coordinated Practice (3 Cr.)**

Continues supervised clinical practice in the dental hygiene clinic with emphasis on coordinating didactic and clinical skills, and refining client treatment skills. Introduces special needs clients and treatment modifications. Lecture 2 hours per week. Generally offered summer.

#### **DNH 214 Practical Materials for Dental Hygiene (2 Cr.)**

Studies the current technologic advances, expanded functions and clinical/laboratory materials used in dental hygiene practice. Provides laboratory experience for developing skills in the utilization and applications of these technologies and functions. Lecture 1 hour per week. Laboratory 2 hours per week. Total 3 hours per week. Generally offered fall.

## Course Descriptions

### **DNH 216 Pharmacology (2 Cr.)**

Studies the chemical and therapeutic agents used in dentistry, including their preparation, effectiveness and specific application. Lecture 2 hours per week. Generally offered spring.

### **DNH 226 Public Health Dental Hygiene I (2 Cr.)**

Studies and compares concepts of delivery of health care, applying the public health delivery model. Utilizes epidemiologic methods, research and biostatistics as applied to oral health program planning, implementation and evaluation. Incorporates and applies current health issues and trends. Lecture 2 hours per week. Generally offered fall.

### **DNH 227 Public Health Dental Hygiene II (1 Cr.)**

Applies concepts of public health program planning through student directed community projects with an emphasis on preventative oral health education. Includes development of table clinics, bulletin board and volunteer service in the community. *Prerequisite:* DNH 226. Laboratory 3 hours per week. Generally offered spring.

### **DNH 230 Office Practice and Ethics (1 Cr.)**

Studies the principles of dental ethics and economics as they relate to the dental hygienist. The course also includes a study of jurisprudence and office procedures. Lecture 1 hour per week. Generally offered spring.

### **DHN 235 Management of Dental Pain and Anxiety in the Dental Office (2 Cr.)**

Provides a study of anxiety and pain management techniques used in dental care. Students will understand the necessary theory to appropriately treat, plan and successfully administer topical anesthesia, local anesthesia, and nitrous oxide/oxygen analgesia. Includes the components of pain, pain control mechanisms, topical anesthesia, local anesthesia and nitrous oxide/oxygen analgesia. *Prerequisites:* DNH 115, DNH 120 and DNH 216. Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week. Generally offered fall.

### **DNH 244 Dental Hygiene IV (5 Cr.)**

Introduces advanced skills and the dental hygienist's role in dental specialties. Includes supervised clinical practice in the dental hygiene clinic and/or off-campus clinical rotations at various community facilities. Emphasizes treatment of clients demonstrating periodontal involvement, stressing application and correlation of knowledge and skills from previous semesters. *Prerequisite:* DNH 143 or DNH 190. Lecture 1 hour per week. Clinic 12 hours per week. Total 13 hours per week. Generally offered fall.

### **DNH 245 Dental Hygiene V (5 Cr.)**

Exposes student to current advances in dentistry. Includes supervised clinical practice in the dental hygiene clinic and/or off-campus clinical rotations at various community facilities. Emphasis is placed on synthesis of knowledge from previous semesters, treatment of clients with moderate to advanced periodontal involvement and improving clinical speed while maintaining quality in preparation for practice. *Prerequisite:* DNH 244. Lecture 1 hour per week. Clinic 12 hours per week. Total 13 hours per week. Generally offered spring.

## **Economics (ECO)**

### **ECO 201 Principles of Macroeconomics (3 Cr.)**

Introduces macroeconomics including the study of Keynesian, classical, monetarist principles and theories, the study of national economic growth, inflation, recession, unemployment, financial markets, money and banking, the role of government spending and taxation, along with international trade and investments. *Prerequisite:* Readiness to enroll in ENG 111 and competence in MTE 1-3, or completion of MTH 120 or MTH 126. Lecture 3 hours per week. Generally offered all semesters.

### **ECO 202 Principles of Microeconomics (3 Cr.)**

Introduces the basic concepts of microeconomics. Explores the free market concepts with coverage of economic models and graphs, scarcity and choices, supply and demand, elasticities, marginal benefits and costs, profits, and production and distribution. *Prerequisites:* Readiness to enroll in ENG 111 and competence in MTE 1-3, or completion of MTH 120 or MTH 126. Lecture 3 hours per week. Generally offered all semesters.

## **Education (EDU)**

### **EDU 200 Intro. to Teaching as a Profession (3 Cr.)**

Provides an orientation to the teaching profession in Virginia, including historical perspectives, current issues and future trends in education on the national and state levels. Emphasizes information about teacher licensure examinations, steps to certification, teacher preparation and induction programs and attention to critical shortage areas in Virginia. Includes supervised field placement (recommended: 40 clock hours) in a K-12 school. *Prerequisite:* successful completion of 24 credits of transfer courses. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered fall and spring.

## Course Descriptions

### **EDU 235 Health, Safety and Nutrition Education (3 Cr.)**

Focuses on the physical needs of children and explores strategies to meet these needs. Emphasizes positive health routines, hygiene, nutrition, feeding and clothing habits, childhood diseases and safety. Places emphasis on the development of food habits and concerns in food and nutrition. Describe symptoms and reporting procedures for child abuse. Lecture 3 hours per week. Generally offered fall and spring.

### **EDU 254 Teaching Basic Academic Skills to Exceptional Children (3 Cr.)**

Develops competencies required to teach readiness and basic skills to children with special needs in private or public school settings. Includes the preparation of lesson plans, instructional units, and individualized Education Programs (IEP's). Includes child abuse recognition and intervention training. Emphasizes exceptionalities for students ages 2-21 under Public Law 94-142. Familiarizes students with the indicators of effective teaching. Lecture 3 hours per week. Generally offered summer.

### **EDU 295 Topics In (1-3 Cr.)**

Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. Variable hours.

## **Electrical Technology (ELE)**

### **ELE 133-134 Practical Electricity I-II (3 Cr.) (3 Cr.)**

Teaches the fundamentals of electricity, terminology, symbols and diagrams. Includes the principles essential to the understanding of general practices, safety and the practical aspects of residential and non-residential wiring and electrical installation, including fundamentals of motors and controls. *Pre/Corequisite: MTE 2 or completion of basic high school math or higher. Part I of II.* Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. ELE 133 Generally offered fall and spring; ELE 134 Generally offered spring.

### **ELE 135 National Electrical Code – Residential (3 Cr.)**

Studies purposes and interpretations of the national electrical code that deals with single and multi-family dwellings, including state and local regulations. Lecture 2-3 hours per week. Laboratory 2-4 hours per week. Total 4-5 hours per week. Generally offered fall.

### **ELE 137 National Electrical Code – Industrial (3 Cr.)**

Provides comprehensive study of the purpose and interpretations of the National Electrical Code that deal primarily with industrial wiring methods, including state and local regulations. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered spring.

### **ELE 156 Electrical Control Systems (3 Cr.)**

Introduces troubleshooting and servicing electrical controls, electric motors, motor controls, motor starters, relays, overloads, instruments and control circuits. May include preparation of a report as an out-of-class activity.

*Prerequisite: ELE 159.* Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered spring.

### **ELE 159 Electrical Motors (3 Cr.)**

Teaches practical applications and fundamentals of A.C. and D.C. machines. Includes the concepts of magnetism and generators used in electrical motor applications. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered fall.

### **ELE 190 Coordinated Internship (1-5 Cr.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours. Generally offered all semesters.

### **ELE 239 Programmable Controllers (3 Cr.)**

Examines installation, programming, interfacing and concepts of trouble shooting programmable controllers. *It is highly recommended that students complete ELE 156 or have the instructor's permission prior to taking ELE 239.* Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered fall.

### **ELE 240 Advanced Programmable Logic Controllers (3 Cr.)**

Advances further study of Programmable Logic Controllers that was initiated in ELE 239. Students will learn to use more advanced program instructions, including data manipulation, sequences and program control, and advanced PLC features, including timers, counters. Covers connectivity and use of a variety of real world I/O devices. *Prerequisite: ELE 239.* Lecture 2 hours. Laboratory 2 hours per week. Total 4 hours per week. Generally offered spring.

### **ELE 290 Coordinated Internship ( Cr.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Variable hours.

## **Electronics Technology (ETR)**

### **ETR 113 D.C. and A.C. Fundamentals I (3 Cr.)**

Studies D.C. and A.C. circuits, basic electrical components, instruments, network theorems and techniques used to predict, analyze and measure electrical quantities. Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered spring.

## Course Descriptions

### **Emergency Medical Services (EMS)**

#### **EMS 151 Intro. to Advanced Life Support (4 Cr.)**

Prepares the student for Virginia Enhanced certification eligibility and begins the sequence for National Registry Intermediate and/or Paramedic certification. Includes the theory and application of the following: foundations, human systems, pharmacology, overview of shock, venous access, airway management, patient assessment, respiratory emergencies, allergic reaction and assessment based management. Conforms at a minimum to the Virginia Office of Emergency Medical Services curriculum. *Corequisite: EMS 170.* Lecture 3 hours per week. Laboratory 2 hours per week. Total 5 hours per week. Generally offered fall.

#### **EMS 152 Advanced EMT Completion (2 Cr.)**

Continues the Virginia Office of Emergency Medical Services Advanced, Intermediate and/or Paramedic curricula. Includes patient assessment, differential diagnosis and management of multiple complaints. Includes, but are not limited to conditions relating to diabetic, neurological, abdominal pain, environmental, behavioral, gynecology, and toxicological disease conditions. Also includes Advanced EMT level cardiac, trauma and special population topics. *Prerequisite: EMT certification.* Lecture 1 hour per week. Laboratory 2 hours. Total 3 hours per week. Generally offered fall.

#### **EMS 154 ALS Cardiac Care (2 Cr.)**

Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Includes Advanced Life Support (ALS) airway management, electrical therapy, pharmacology, drug and fluid administration with emphasis on patient assessment, differential diagnosis and management of cardiovascular emergencies. It will incorporate the current American Heart Association (AHA) - ACLS guidelines and curriculum including stroke management. *Prerequisites: EMS 151 and EMS 153.* Lecture 1 hour per week. Laboratory 2 hours. Total 3 hours per week. Generally offered spring.

#### **EMS 153 Basic ECG Recognition (2 Cr.)**

Focuses on the interpretation of basic electrocardiograms (ECG) and their significance. Includes an overview of anatomy and physiology of the cardiovascular system including structure, function and electrical conduction in the heart. Covers advanced concepts that build on the knowledge and skills of basic dysrhythmia determination and introduction to 12 lead ECG. Lecture 2 hours per week. Generally offered fall.

#### **EMS 155 ALS Medical Care (4 Cr.)**

Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Includes ALS pharmacology, drug and fluid administration with emphasis on patient assessment, differential diagnosis and management of multiple medical complaints. Includes, but are not limited to conditions relating to cardiac, diabetic, neurological, nontraumatic abdominal pain, environmental, behavioral, gynecology and toxicological disease conditions. *Prerequisites: current EMT-B certification, EMS 151 and EMS 153.* Lecture 3 hours per week. Laboratory 2 hours per week. Total 5 hours per week. Generally offered spring.

#### **EMS 157 ALS Trauma Care (3 Cr.)**

Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Utilizes techniques which will allow the student to utilize the assessment findings to formulate a field impression and implement the treatment plan for the trauma patient. *Prerequisites: current EMT-B certification and EMS 151.* Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered fall.

#### **EMS 159 ALS Special Populations (3 Cr.)**

Continues the Virginia Office of Emergency Medical Services Intermediate and/or Paramedic curricula. Focuses on the assessment and management of specialty patients including obstetrical, neonates, pediatric and geriatrics. *Prerequisites: EMS 151 and EMS 153. Pre or Corequisite EMS 155.* Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered spring.

#### **EMS 170 ALS Internship I (1-2 Cr.)**

Begins the first in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes but not limited to patient care units such as the emergency department, critical care units, pediatric, labor and delivery, operating room, trauma centers and various advanced life support units. Laboratory 3-6 hours per week. Generally offered fall.

#### **EMS 172 ALS Clinical Internship II (1 Cr.)**

Continues with the second in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in and out of hospitals. Includes but not limited to patient care units such as the emergency department, critical care units, pediatric, labor and delivery, operating room and trauma centers. *Corequisite: EMS 151.* Laboratory 3-6 hours per week. Generally offered spring.

#### **EMS 173 ALS Field Internship II (1 Cr.)**

Continues with the second in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. Laboratory 3 hours per week. Generally offered spring.



## Course Descriptions

### **EMS 196 On-Site Training (1 Cr.)**

Specializes in career orientation and training program without pay in selected businesses and industry, supervised and coordinated by the college. Lecture 1 hour per week. Generally offered summer, if needed.

### **EMS 201 EMS Professional Development (3 Cr.)**

The purpose of this course is to prepare the EMS student to use community resources to facilitate personal and community wellness and fulfills the wellness and resource objectives of the Virginia Office of Emergency Medical Services Intermediate curriculum. *Prerequisite: EMT/B Certification.* Lecture 3 hours. Total 3 hours per week. Generally offered fall.

### **EMS 205 Advanced Pathophysiology (4 Cr.)**

Focuses on the pathological processes of disease with emphasis on the anatomical and physiological alterations of the human body by systems. Includes diagnosis and management appropriate to the advanced health care provider in and out of the hospital environment. Lecture 4 hours. Total 4 hours per week. *Prerequisite: EMT/B Certification.* Generally offered spring.

### **EMS 207 Advanced Patient Assessment (3 Cr.)**

Focuses on the principles of normal and abnormal physical exam. Emphasizes the analysis and interpretation of physiological data to assist in patient assessment and management. Applies principles during the assessment and management of trauma, medical, and specialty patients in laboratory environment. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered spring.

### **EMS 209 Advanced Pharmacology (4 Cr.)**

Focuses on the principles of pharmacokinetics, pharmacodynamics and drug administration. Includes drug legislation, techniques of medication administration, and principles of math calculations. Emphasizes drugs used to manage respiratory, cardiac, neurological, gastrointestinal, fluid and electrolyte and endocrine disorders and includes classification, mechanism of action, indications, contraindications, precautions, and patient education. Incorporates principles related to substance abuse and hazardous materials. Applies principles during the assessment and management of trauma, medical, and specialty patients in a laboratory environment. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week. Generally offered fall.

### **EMS 211 Operations (2 Cr.)**

Prepares the student in the theory and application of the following: medical incident command, rescue awareness and operations, hazardous materials incidents, and crime scene awareness. (Conforms to the current Virginia Office of Emergency Medical Services curriculum for EMT-Paramedics.) Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week. Generally offered fall.

### **EMS 242 ALS Clinical Internship III (1 Cr.)**

Continues with the third in a series of clinical experiences providing supervised direct patient contact in appropriate patient care facilities in-and-out of hospitals. Includes but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room, Trauma Centers and various advanced life support units. Laboratory 3-6 hours per week. Generally offered fall.

### **EMS 243 ALS Field Internship III (1 Cr.)**

Continues with the third in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. Laboratory 3-6 hours per week. Generally offered fall.

### **EMS 244 ALS Clinical Internship IV (1 Cr.)**

The fourth in a series of clinical experiences providing direct patient contact in appropriate patient care facilities in-and-out of hospitals. Includes, but not limited to patient care units such as the Emergency Department, Critical Care units, Pediatric, Labor and Delivery, Operating Room and Trauma Centers. May be repeated as necessary. Laboratory 3-6 hours per week. Generally offered spring.

### **EMS 245 ALS Field Internship IV (1 Cr.)**

Continues with the fourth in a series of field experiences providing supervised direct patient care in out-of-hospital advanced life support units. May be repeated as necessary. Laboratory 3-6 hours per week. Generally offered spring.

## **Engineering (EGR)**

### **EGR 110 Engineering Graphics (3 Cr.)**

Presents theories and principles of orthographic projection. Studies multi-view, pictorial drawings and sketches, geometric construction, sectioning, lettering, tolerancing, dimensioning and auxiliary projections. Studies the analysis and graphic presentation of space relationships of fundamental geometric elements; points, lines, planes and solids. Preparation of drawings using both manual techniques and Computer Aided Drafting (CAD). Lecture 2 hours per week. Laboratory 2 hours per week. Total 4 hours per week. Generally offered fall and spring.

## Course Descriptions

### **EGR 120 Introduction to Engineering (2 Cr.)**

Introduces the engineering profession, professional concepts, ethics, and responsibility. Reviews hand calculators, number systems, and unit conversions. Introduces the personal computer and operating systems. Includes engineering problem solving techniques using computer software. *Corequisite: MTH 173.* Lecture 2 hours. Laboratory 1 hour. Total 3 hours per week. Generally offered fall.

### **EGR 123 Introduction to Engineering Design (2 Cr.)**

Introduces the fundamental knowledge and experience needed to understand the engineering design process through the basics of electrical, computer, and mechanical systems. Includes the completion of a project in which a specific electromechanical robot kit will be analyzed, assembled, and operated. *Prerequisites: MTH 173 and EGR 120 and EGR 126.* Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week. Generally offered spring.

### **EGR 126 Computer Programming for Engineers (3 Cr.)**

Introduces computers, their architecture and software. Teaches program development using flowcharts. Solves engineering problems involving programming in languages such as FORTRAN, PASCAL, or C++. Lecture 3 hours. Total 3 hours per week. Generally offered fall.

### **EGR 135 Statics for Engineering Technology (3 Cr.)**

Introduces Newton's Laws, resultants and equilibrium of force systems, analysis of trusses and frames. Teaches determination of centroids, distributed loads and moments of inertia. Covers dry friction and force systems in space. *Prerequisite: MTH 115.* Lecture 3 hours per week. Generally offered fall.

### **EGR 136 Strength of Materials for Engineering Technology (3 Cr.)**

Presents concepts of stress and strain. Focuses on analysis of stresses and deformations in loaded members, connectors, shafts, beams, columns and combined stress. *Prerequisite: EGR 135.* Lecture 3 hours per week. Generally offered spring.

### **EGR 140 Engineering Mechanics - Statics (3 Cr.)**

Introduces mechanics of vector forces and space, scalar mass and time, including S.I. and U.S. customary units. Teaches equilibrium, free-body diagrams, moments, couples, distributed forces, centroids, moments of inertia analysis of two-force and multi-force members and friction and internal forces. *Prerequisite: MTH 174.* Lecture 3 hours per week. Generally offered fall.

### **EGR 206 Engineering Economics (3 Cr.)**

Presents economic analysis of engineering alternatives. Studies economic and cost concepts, calculation of economic equivalence, comparison of alternatives, replacement economy, economic optimization in design and operation, depreciation and after tax analysis. Lecture 3 hours per week. Generally offered fall.

### **EGR 216 Computer Methods in Engineering and Technology (3 Cr.)**

Provides advanced level experience in using a computer as a tool for solving technical problems and performing office functions. Includes computer hardware and operating system usage, structured programming in a selected high level language, use of word processing software, computer graphics and spreadsheets. Focuses on the analysis and solution of problems in engineering and technology. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered spring.

### **EGR 245 Engineering Mechanics - Dynamics (3 Cr.)**

Presents approach to kinematics of particles in linear and curvilinear motion. Includes kinematics of rigid bodies in plane motion. Teaches Newton's second law, work-energy and power, impulse and momentum, and problem solving using computers. *Prerequisite: MTH 174.* Lecture 3 hours per week. Generally offered fall.

### **EGR 246 Mechanics of Materials (3 Cr.)**

Teaches concepts of stress, strain, deformation, internal equilibrium, and basic properties of engineering materials. Analyzes axial loads, torsion, bending, shear and combined loading. Studies stress transformation and principle stresses, column analysis and energy principles. *Prerequisite: EGR 140.* Lecture 3 hours per week. Generally offered spring.

## **English (ENG)**

### **ENG 111 College Composition I (3 Cr.)**

Introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics: develop and support ideas; investigate, evaluate and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences and purposes. Writing activities will include exposition and argumentation with at least one researched essay. *Prerequisite: Satisfactory score on the VPT-English or satisfactory completion of ENF 1 or ENF 2.* Lecture 3 hours per week. Generally offered all semesters.

## Course Descriptions

### ENG 112 College Composition II (3 Cr.)

Continues to develop college writing with increased emphasis on critical essays, argumentation and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate and document sources and effectively edit for style and usage. *Prerequisite:* ENG 111. Lecture 3 hours per week. Generally offered all semesters.

### ENG 115 Technical Writing (3 Cr.)

Develops ability in technical writing through extensive practice in composing technical reports and other documents. Guides students in achieving voice, tone, style and content in formatting, editing and graphics. Introduces students to technical discourse through selected reading. *Prerequisite:* placement testing approval for ENG 111 or instructor approval. Lecture 3 hours per week. Generally offered fall and spring.

### ENG 116 Writing for Business (3 Cr.)

Develops ability in business writing through extensive practice in composing business correspondence and other documents. Guides students in achieving voice, tone, style and content appropriate to a specific audience and purpose. Includes instruction in formatting and editing. Introduces students to business discourse through selected readings. Lecture 3 hours per week. Offered periodically.

### ENG 121 Introduction to Journalism I (3 Cr.)

Introduces students to all news media, especially news gathering and preparation for print. *Prerequisite:* ENG 111 or 112 or divisional approval. Part I of II. Lecture 3 hours per week.

### ENG 122 Introduction to Journalism II (3 Cr.)

Introduces students to all news media, especially news gathering and preparation for print. *Prerequisite:* ENG 111 or 112 or divisional approval. Part II of II. Lecture 3 hours per week.

### ENG 139 College Grammar (3 Cr.)

Studies formal English grammar and effective expression with attention to recognizing and employing appropriately the various levels of English usage, thinking logically, speaking and writing effectively, editing, evaluating content and intent of both spoken and written English, and punctuating correctly. Lecture 3 hours per week. Offered periodically.

### ENG 195 English Honors Seminar (1 Cr.)

Explores works on an annual theme selected by the English faculty. Presents varied faculty and student viewpoints and encourages students to research and present individual aspects of theme. Offered for honors credit. Students may enroll more than once. *Instructor approval required.* Offered periodically.

### ENG 210 Advanced Composition (3 Cr.)

Helps students refine skills in writing non-fiction prose. Guides development of individual voice and style. Introduces procedures for publication. *Prerequisite:* ENG 112. Lecture 3 hours per week. Offered periodically.

### ENG 211-212 Creative Writing I-II (3 Cr.) (3 Cr.)

Introduces the student to the fundamentals of writing imaginatively. Students write in forms to be selected from poetry, fiction, drama and essays. *Prerequisite:* ENG 112. Lecture 3 hours per week. Offered periodically.

### ENG 215-216 Creative Writing – Fiction I-II (3 Cr.) (3 Cr.)

Introduces the fundamentals and techniques of writing short and long fiction. *Prerequisite:* ENG 112. Lecture 3 hours per week. Offered periodically.

### ENG 217 Creative Writing Poetry I (3 Cr.)

Introduces the fundamentals and techniques of writing poetry. Lecture 3 hours per week. Offered periodically.

### ENG 218 Creative Writing Poetry II (3 Cr.)

Introduces the fundamentals and techniques of writing poetry. *Prerequisite:* ENG 217 or instructor's approval. 3 hours per week. Offered periodically.

### ENG 236 Introduction to the Short Story (3 Cr.)

Examines selected short stories emphasizing the history of the genre. Involves critical reading and writing. *Prerequisite:* ENG 112. Lecture 3 hours per week. Offered periodically.

### ENG 241-242 Survey of American Literature I-II (3 Cr.) (3 Cr.)

Examines American literary works from colonial times to the present, emphasizing the ideas and characteristics of our national literature. Involves critical reading and writing. *Prerequisite:* ENG 112. Lecture 3 hours per week. Generally offered all semesters.

### ENG 243-244 Survey of English Literature I-II (3 Cr.) (3 Cr.)

Studies major English works from the Anglo-Saxon period to the present, emphasizing ideas and characteristics of the British literary tradition. Involves critical reading and writing. *Prerequisite:* ENG 112. Lecture 3 hours per week. Generally offered all semesters.

## Course Descriptions

### ENG 245 Major English Writers (3 Cr.)

Examines major writers in English literary history. Involves critical reading and writing. *Prerequisite: ENG 112 or divisional approval.* Lecture 3 hours per week. Offered periodically.

### ENG 246 Major American Writers (3 Cr.)

Examines major writers of American literary history. Involves critical reading and writing. *Prerequisite: ENG 112.* Lecture 3 hours per week. Offered periodically.

### ENG 250 Children's Literature (3 Cr.)

Surveys the history, development and genres of children's literature, focusing on analysis of texts for literary qualities and in terms of audience. *Prerequisite: ENG 112 or 125.* Lecture 3 hours per week. Generally offered summer.

### ENG 251-252 Survey of World Literature I-II (3 Cr.) (3 Cr.)

Examines major works of world literature. Involves critical reading and writing. *Prerequisite: ENG 112.* Lecture 3 hours per week. Generally offered fall and spring.

### ENG 255 Major Writers in World Literature (3 Cr.)

Examines major writers selected from a variety of literary traditions. Involves critical reading and writing. *Prerequisite: ENG 112 or divisional approval.* Lecture 3 hours per week. Generally offered fall.

### ENG 261-262 Advanced Creative Writing I-II (3 Cr.) (3 Cr.)

Guides the student in imaginative writing in selected genres on an advanced level. *Prerequisites: ENG 112 and ENG 211 or 212.* Lecture 3 hours per week. Offered periodically.

### ENG 270 Non-Western Literature in Global Context (3)

Examines non-western popular culture, written texts, film and mythology through the lens of comparative literature and the shifting horizons brought on by dynamic changes in global social and cultural values. *Prerequisite: ENG 112.* Lecture 3 hours per week. Offered periodically.

### ENG 276 Southern Literature (3 Cr.)

Examines the themes and techniques of selected writers dealing with the American South as a distinctive cultural entity. Involves critical reading and writing. *Prerequisite: ENG 112.* Lecture 3 hours per week. Offered periodically.

### ENG 278 Appalachian Literature (3 Cr.)

Examines selected works of outstanding authors of the Appalachian region. Involves critical reading and writing. Lecture 3 hours per week. Offered periodically.

### ENG 279 Film and Literature (3 Cr.)

Examines the translation of literature into film viewing and writing. *Prerequisite: ENG 112 or divisional approval.* Lecture 3 hours per week. Offered periodically.

### ENG 280 Writing User Manuals (3 Cr.)

Provides instruction on how to design, write and test a manual. Focuses on the principles used in writing technical manuals, the document process, design and drafting procedures and finally, testing and revising the manual. *Prerequisite: ENG 112 or division approval.* Lecture 3 hours per week. Offered periodically.

## English Fundamentals ENF)

### ENF 1 (8 Cr.)

Provides integrated reading and writing instruction for students who require extensive preparation to succeed in college-level English courses. *Students will place into this course based on placement test score.* Upon successful completion and faculty recommendation, students will move into Preparing for College English III (if they require additional preparation) or into college-level English (if they require no additional preparation). Credit is not applicable toward graduation. Lecture 8 hours per week. Generally offered all semesters.

### ENF 2 (4 Cr.)

Provides integrated reading and writing instruction for students who require intermediate preparation to succeed in college-level English courses. *Students will place into this course based on placement test score.* Upon successful completion and faculty recommendation, students will move into Preparing for College Level III (if they require additional preparation) or into college-level English (if they require no additional preparation). Credit is not applicable toward graduation. Generally offered all semesters.

### ENF 3 (2 Cr.)

Provides integrated reading and writing instruction for students who require minimal preparation for college-level English but still need some preparation to succeed. *Students in this course will be co-enrolled in college-level English. Students will place into this course based on placement test score.* Credit is not applicable toward graduation. Generally offered all semesters.

## Course Descriptions

### **English As a Second Language (ESL)**

#### **ESL 7 Oral Communication I (3 Cr.)**

Helps students practice and improve listening and speaking skills as needed for functioning successfully in academic, professional and personal settings. Assesses students' oral skills and includes, as needed, practice with pronunciation, stress and intonation. Provides exercises, practices, small and large group activities and oral presentations to help students overcome problems in oral communication. Lecture 3 hours per week. Generally offered summer.

#### **ESL 17 English As a Second Language: Reading III (3 Cr.)**

Helps students improve their reading comprehension and vocabulary development. Improves students' reading proficiency to a level which would allow students to succeed in certificate and degree programs. Emphasizes applying and synthesizing ideas. Includes ways to detect organization, summarize, make inferences, draw conclusions, evaluate generalizations, recognize differences between facts and opinions, and other advanced comprehension strategies. May also include comprehensive library skills. Generally offered summer.

#### **ESL 18 English As a Second Language: Writing Workshop (3-6 Cr.)**

Provides an opportunity for further practice in intermediate and advanced writing techniques taught in required ESL writing courses. Provides reinforcement in writing skills, including composing, organizing, revising and editing. Variable hours per week. Generally offered fall and spring.

#### **ESL 31 Composition I (3 Cr.)**

Provides instruction and practice in the writing process, emphasizing development of fluency in writing and competence in structural and grammatical patterns of written English. Prerequisite: Requires ability to express ideas clearly in writing without a consistent pattern of grammatical errors as indicated by a placement exam or teacher recommendation from a previous level. Credits are not applicable toward graduation. *Prerequisite: Placement via COMPASS placement test.* Lecture 3 hours per week. Generally offered fall and spring.

#### **ESL 32 Reading I (3 Cr.)**

Helps students improve their reading comprehension and vocabulary development. Improves students' reading proficiency to a level that would allow the students to function adequately in **ESL 42** and other college classes. Prerequisite: Requires competency in reading as indicated by the placement test or by teacher recommendation from a previous level. *Prerequisite: Placement via COMPASS placement test.* Lecture 3 hours per week. Generally offered fall and spring.

#### **ESL 33 Oral Communications I (3 Cr.)**

Helps students practice and improve listening and speaking skills as needed for functioning successfully in academic, professional, and personal settings. Assesses students' oral skills and includes, as needed, practice with pronunciation, rhythm, stress, and intonation. Provides exercises, practices, small and large group activities, and oral presentations to help students overcome problems in oral communication. Credits are not applicable toward graduation. Prerequisite: Requires competency in the English language as indicated by a placement test score or teacher recommendation from a previous level or from other college classes. *Prerequisite: Placement via COMPASS placement test.* Lecture 3 hours per week. Generally offered fall and spring.

#### **ESL 35 Applied Grammar 3 (3 Cr.)**

Provides instruction and practice in the use of intermediate-level academic English grammar structures including verb tenses, parts of speech and basic sentence structure. Helps ESL students assess their own knowledge of English grammar, improve accuracy, and learn methods to improve editing. *Prerequisite: Placement via COMPASS placement test.* Lecture 3 hours per week. Generally offered fall and spring.

#### **ESL 41 Composition II (3 Cr.)**

Provides further instruction and practice in the writing process and introduces advanced language patterns. Includes practice in developing and improving writing strategies. Credits are not applicable: Requires a sense of paragraph structure and development, appropriate use of verb forms, and command of basic sentence structures with some coordination and subordination, as indicated by a placement test and writing sample, or teacher recommendation from a previous level. Credits are not applicable toward graduation. *Prerequisite: Placement via COMPASS placement test.* Lecture 3 hours per week.

#### **ESL 42 Reading II (3 Cr.)**

Improves students' reading proficiency to a level that would allow students to function adequately in the **ESL 52** reading class and other college courses. Credits are not applicable toward graduation. Prerequisite: Requires competency in reading as indicated by the placement test or by teacher recommendation from a previous level. Helps students improve their reading comprehension and vocabulary development. *Prerequisite: Placement via COMPASS placement test.* Lecture 3-6 hours per week. Generally offered fall and spring.

## Course Descriptions

### **ESL 43 Oral Communication II (3 Cr.)**

Provides further instruction and practice in helping students to improve listening and speaking skills. Assesses students' oral skills and includes, as needed, practice with pronunciation, rhythm, stress, and intonation. Emphasizes the development of fluency through exercises, practices, small and large group activities, and formal and informal presentations. *Prerequisite: Placement via COMPASS placement test.* Variable hours per week. Generally offered fall and spring.

### **ESL 45 Applied Grammar 4 (3 Cr.)**

Provides instruction and practice in the use of high intermediate and advanced academic English grammar structures including advanced verb forms, clauses, determiners, and prepositions. Helps ESL students assess their own knowledge of English grammar, improve accuracy, and learn methods to improve editing. Lecture 3 hours per week.

### **ESL 95 Preparing for College English 111 for ESL (2 Cr.)**

Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors courses. May be repeated for credit. *Prerequisite: Readiness for ENG 111.* Variable hours. Generally offered fall and spring.

## **Environmental Science (ENV)**

### **ENV 121 General Environmental Science I (4 Cr.)**

Explores fundamental components and interactions that make up the natural systems of the earth. Introduces the basic science concepts in the discipline of biological, chemical, and earth sciences that are necessary to understand and address environmental issues. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

### **ENV 122 General Environmental Science II (4 Cr.)**

Explores fundamental components and interactions that make up the natural systems of the earth. Introduces the basic science concepts in the disciplines of biological, chemical, and earth sciences that are necessary to understand and address environmental issues. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

## **Financial Services (FIN)**

### **FIN 107 Personal Finance (3 Cr.)**

Presents a framework of personal money management concepts, including establishing values and goals, determining sources of income, managing income, preparing a budget, developing consumer buying ability, using credit, understanding savings and insurance, providing for adequate retirement and estate planning. Lecture 3 hours per week. Generally offered spring.

### **FIN 215 Financial Management (3 Cr.)**

Introduces basic financial management topics including statement analysis, working capital, capital budgeting, and long-term financing. Focuses on net present value and internal rate of return techniques, lease vs. buy analysis and cost of capital computations. Uses problems and cases to enhance skills in financial planning and decision-making. Lecture 3 hours per week. Generally offered fall.

## **French (FRE)**

### **FRE 101-102 Beginning French I-II (4 Cr.) (4 Cr.)**

Introduces understanding, speaking, reading and writing skills and emphasizes basic French sentence structure. *Prerequisite: FRE 101 for FRE 102.* Lecture 4 hours per week. Generally offered fall and spring.

### **FRE 201-202 Intermediate French I-II (3 Cr.) (3 Cr.)**

Continues to develop understanding, speaking, reading and writing skills. French used in the classroom. *Prerequisite: FRE 102 for FRE 201; FRE 201 for FRE 202.* Lecture 3 hours per week. Generally offered fall and spring.

### **FRE 233-234 Introduction to French Civilization and Literature I-II (3 Cr.) (3 Cr.)**

Introduces the student to French culture and literature. Readings and discussions conducted in French. *Prerequisite: FRE 201-202 or equivalent.* Offered periodically.

## **Geography (GEO)**

### **GEO 210 People and the Land: Intro to Cultural Geography (3 Cr.)**

Focuses on the relationship between culture and geography. Presents a survey of modern demographics, landscape modification, material and non-material culture, language, race and ethnicity, religion, politics and economic activities. Introduces the student to types and uses of maps. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

### **GEO 220 World Regional Geography (3 Cr.)**

Studies physical and cultural characteristics of selected geographical regions of the world. Focuses upon significant problems within each of the regions, and examines the geographical background of those problems. Introduces the student to types and uses of maps. Lecture 3 hours per week. Generally offered all semesters.

## Course Descriptions

### **Geology (GOL)**

#### **GOL 105 Physical Geology (4 Cr.)**

Introduces the composition and structure of the earth and modifying agency and processes. Investigates the formation of minerals and rocks, weathering, erosion, earthquakes and crustal deformation. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Laboratory 3 hours per week. Total 6 hours per week. Generally offered all semesters.

#### **GOL 106 Historical Geology (4 Cr.)**

Traces the evolution of the earth and life through time. Presents scientific theories of the origin of the earth and life and interprets rock and fossil records. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Laboratory 3 hours per week. Total 6 hours per week. Generally offered all semesters.

### **German (GER)**

#### **GER 101 Beginning German I (4-5 Cr.)**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic German sentence structures. Lecture 4-5 hours per week. May include one additional hour oral practice per week. Generally offered fall.

#### **GER 102 Beginning German II (4-5 Cr.)**

Introduces understanding, speaking, reading, and writing skills and emphasizes basic German sentence structures. Part II of II. Lecture 4-5 hours per week. May include one additional hour oral practice per week. Generally offered spring.

#### **GER 201 Intermediate German I (3-4 Cr.)**

Continues to develop understanding, speaking, reading, and writing skills. German is used in the classroom. *Prerequisite: GER 102 or equivalent.* Part I of II. Lecture 3-4 hours per week. May include one additional hour oral practice per week. Offered periodically.

#### **GER 202 Intermediate German II (3-4 Cr.)**

Continues to develop understanding, speaking, reading, and writing skills. German is used in the classroom. *Prerequisite: GER 102 or equivalent.* Part II of II. Lecture 3-4 hours per week. May include one additional hour oral practice per week. Offered periodically.

### **Health (HLT)**

#### **HLT 100 First Aid and Cardiopulmonary Resuscitation (2 Cr.)**

Focuses on the principles and techniques of safety, first aid, and cardiopulmonary resuscitation. Lecture 2-3 hours per week. Generally offered spring.

#### **HLT 106 First Aid Safety (2 Cr.)**

Focuses on the principles and techniques of safety and first aid. Lecture 2 hours per week. Generally offered spring.

#### **HLT 115 Intro to Personal and Community Health (1 Cr.)**

Introduces and focuses on the principles of personal and community health. Lecture 1 hour per week. Generally offered fall and spring.

#### **HLT 116 Personal Wellness (2 Cr.)**

Introduces students to the dimensions of wellness, including nutrition, weight control, stress management and physical conditioning. Includes a personal wellness plan. Lecture 2 hours per week. Generally offered fall and spring.

#### **HLT 130 Nutrition and Diet Therapy (2 Cr.)**

Studies nutrients, sources, functions and requirements with an introduction to diet therapy. Lecture 2 hours per week. Generally offered all semesters.

#### **HLT 160 Personal Health and Fitness (3 Cr.)**

Studies the relationships between health and fitness. Topics include nutrition, disease prevention, weight control, smoking and health, medical care, aerobic and anaerobic conditioning. And the relationship between physical and mental health. Lecture 2 hours per week. Laboratory 2 hours per week. Total 3 hours per week. Generally offered fall and spring.

#### **HLT 206 Exercise Science (3 Cr.)**

Surveys scientific principles, methodologies, and research as applied to exercise and physical fitness. Emphasizes physiological responses and adaptations to exercise. Addresses basic elements of kinesiology, biomechanics, and motor learning. Presents an introduction to the physical fitness industry. Lecture 3 hours per week

#### **HLT 208 Fitness and Exercise Training (3 Cr.)**

Introduces techniques for conducting physical fitness assessments and includes an introduction to electrocardiography. Emphasizes tests of Cardio respiratory fitness, muscular strength and endurance, joint flexibility, body composition, and pulmonary capacity. Emphasizes the safety guidelines and precautions used in testing. Covers equipment use and maintenance. *Prerequisite: HLT 100.* Lecture 2 hours. Laboratory 2-3 hours. Total 4-5 hours per week. Generally offered fall and spring.

#### **HLT 215 Personal Stress and Stress Management (2 Cr.)**

Provides a basic understanding of stress and its physical, psychological and social effects. Includes the relationships between stress and change, self-evaluation, sources of stress and current coping skills for handling stress. Lecture 2 hours per week. Generally offered fall and spring.

## Course Descriptions

### **HLT 230 Principles of Nutrition and Human Development (3 Cr.)**

Teaches the relationship between nutrition and human development. Emphasizes nutrients, balanced diet, weight control, and the nutritional needs of an individual. Lecture 3 hours per week. Generally offered spring.

### **Health Information Management (HIM)**

#### **HIM 110 Introduction to Human Pathology (3 Cr.)**

Introduces the basic concepts, terminology, etiology, and characteristics of pathological processes. *Prerequisite: BIO 145 or BIO 141/142.* Lecture 3 hours per week. Generally offered fall and spring.

#### **HIM 111-112 Medical Terminology I-II (3 Cr.) (3 Cr.)**

Introduces the student to the language used in the health record. Includes a system-by-system review of anatomic disease, operative terms, abbreviations, radiography procedures, laboratory tests and pharmacology terms. *Prerequisites: Readiness to enroll in ENG 111. HIM 111 for HIM 112.* Lecture 3 hours per week. Generally offered all semesters.

#### **HIM 115 Ambulatory Coding and Classification (3 Cr.)**

Focuses on disease and procedure classification in the ambulatory care environment. Develops basic coding and classification knowledge using ICD-9-CM and CPT. Not Intended for HIT majors. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally periodically in fall.

#### **HIM 130 Healthcare Information Systems (3 Cr.)**

Teaches basic concepts of microcomputer software (to include operating systems, word processing, spreadsheets, and database applications). Focuses on microcomputer applications, information systems and applications in the health care environment. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered spring.

#### **HIM 141 Fundamentals of Health Information Systems I (3 Cr.)**

Focuses on health data collection, storage, retrieval and reporting systems, with emphasis on the role of the computer in accomplishing these functions. *Prerequisite: Readiness to enroll in ENG 111. ITE 115 preferred.* Lecture 3 hours per week. Generally offered fall and spring.

#### **HIM 143 Managing Electronic Billing in a Medical Practice (3 Cr.)**

Presents practical knowledge on use of computer technology in medical practice management. Develops basic skills in preparation of universal billing claim. Explores insurance claim processing issues. *Prerequisites: Readiness to enroll in ENG 111 and HIM 253 and AST 101, AST 102 or AST 141.* Lecture 3 hours per week. Generally offered summer.

#### **HIM 220 Health Statistics (2 Cr.)**

Introduces the student to basic statistical principles and calculations as applied in the health care environment, procedures for collection and reporting vital statistics, and basic quality control basics. *Prerequisites: ENG 111 placement required and HIM 141.* Lecture 2 hours per week. Generally offered spring.

#### **HIM 226 Legal Aspects of Health Record Documentation (2 Cr.)**

Presents the legal requirements associated with health record documentation. Emphasizes the policies and procedures concerning the protection of the confidentiality of patient's health records. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 2 hours per week. Generally offered fall.

#### **HIM 229 Performance Improvement in Health Care Settings (2 Cr.)**

Focuses on concepts of facility wide performance improvement, resource management and risk management. Applies tools for data collection and analysis. *Prerequisite: ENG 111 placement required.* Lecture 1 hour. Laboratory 2 hours. Total 3 hours per week. Generally offered spring.

#### **HIM 230 Information Systems and Technology in Health Care (3 Cr.)**

Explores computer technology and system application in health care. Introduces the information systems life cycle. LITE 120 may substitute for HIM 230. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 2 hours per week. Laboratory 3 hours per week. Total 5 hours per week. Generally offered fall.

#### **HIM 231 Health Record Applications I (3 Cr.)**

Uses an integrated approach to practicing health record skills in a simulated clinical environment. Emphasizes the use of the microcomputer in accomplishing problem-solving tasks. Part I of II. *Prerequisite: Readiness to enroll in ENG 111 and HIM 111, HIM 112; HIM 250 and BIO 141 and BIO 142 or BIO 145 or NAS 150.* Laboratory 6 hours per week. Generally offered fall.



## Course Descriptions

### **HIM 232 Health Record Applications II (3 Cr.)**

Continues utilizing an integrated approach to practicing health record skills in a simulated clinical environment. Emphasizes the use of the microcomputer in accomplishing problem-solving tasks. *Prerequisites: Readiness to enroll in ENG 111 and HIM 231.* Part II of II. Laboratory 6 hours per week. Generally offered spring.

### **HIM 249 Supervision and Management Practices (3 Cr.)**

Introduces supervision and management principles with emphasis on the application of these principles in the health information setting. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered fall.

### **HIM 250 Health Data Classification Systems I: ICD-9-CM (4 Cr.)**

Focuses on diagnosis and procedure classification using ICD-9-CM. This system is currently utilized for collecting health data for the purposes of statistical research and financial reporting. *Prerequisites: ENG 111 placement required. BIO 145 (or BIO 141 and BIO 142) and HIM 112.* Lecture 4 hours per week. Generally offered spring.

### **HIM 253 Health Records Coding (4 Cr.)**

Examines the development of coding classification systems. Introduces ICD-9-CM coding classification system, its format and conventions. Stresses basic coding steps and guidelines according to body systems. Provides actual coding exercises in relation to each system covered. *Prerequisites: Readiness to enroll in ENG 111 and HIM 111 and BIO 145 or BIO 141 and BIO 142.* Lecture 4 hours per week. Generally offered spring.

### **HIM 254 Advanced Coding and Reimbursement (4 Cr.)**

Stresses advanced coding skills through practical exercises using actual medical records. Introduces CPT-4 coding system and guidelines for out-patient/ambulatory surgery coding. Introduces prospective payment system and its integration with ICD-9-CM coding. *Prerequisites: HIM 253 and HIM 112.* Lecture 4 hours per week. Generally offered summer.

### **HIM 255 Health Data Classification Systems II: CPT (2 Cr.)**

Focuses on procedure classification using CPT. This system is currently utilized for collecting health data for the purposes of statistical research and financial reporting. *Prerequisites: BIO 145 (or BIO 141 and BIO 142), HIM 112, and HIM 250.* Lecture 2 hours per week. Generally offered fall.

### **HIM 260 Pharmacology for Health Information Technology (2 Cr.)**

Emphasizes general pharmacology for Health Information professionals; covers general principles of drug actions/reactions, major drug classes, specific agents within each class, and routine mathematical calculation needed to determine desired dosages. *Prerequisite: HIM 110.* Lecture 2 hours per week. Generally offered spring and summer.

### **HIM 265 Facility Based Medical Coding (3 Cr.)**

Students will learn to accurately assign CPT, ICD-9 Level 1, 2 and 3, in addition to HCPCS codes for inpatient, outpatient facility, and ambulatory surgical centers according to guidelines and rules set forth by the cooperating parties. Students will apply the theory and regulations concerning prospective payments systems (in and out of the facility setting) APC and DRG assignment. *Prerequisite: Readiness to enroll in ENG 111. Instructor permission required.* Lecture 3 hours per week. Offered periodically in spring.

### **HIM 290 Coordinated Internship (3 Cr.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Credit/practice ratio not to exceed 1:5 hours. May be repeated for credit. Generally offered spring and summer.

### **HIM 296 On-Site Training (1 Cr.)**

Specializes in career orientation and training program without pay in selected businesses and industry, supervised and coordinated by the college. Credit/work ratio not to exceed 1:5 hours. May be repeated for credit. 1-5 credits. Generally offered spring and summer.

## **History (HIS)**

### **HIS 101 History of Western Civilization I (3 Cr.)**

Examines the development of western civilization from ancient times to the present. Part I of II. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered fall.

### **HIS 102 History of Western Civilization II (3 Cr.)**

Examines the development of western civilization from ancient times to the present. Part II of II. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week.

### **HIS 111-112 History of World Civilization I-II (3 Cr.) (3 Cr.)**

Surveys Asian, African, Latin American and European civilizations from the ancient period to the present. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

## Course Descriptions

### **HIS 121-122 United States History I-II (3 Cr.)**

Surveys United States history from its beginning to the present. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

### **HIS 141-142 African-American History I-II (3 Cr.) (3 Cr.)**

Surveys the history of black Americans from their African origins to the present. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HIS 193 Studies In (1-5 Cr.)**

Covers new content not covered in existing courses in the discipline. Allows instructor to explore content and instructional methods to assess the course's viability as a permanent offering. Variable hours per week. Offered periodically.

### **HIS 251-252 History of Middle East Civilization I-II (3 Cr.) (3 Cr.)**

Surveys intellectual, cultural, social, economic and religious patterns in the civilizations of the Middle East. Covers Semitic, Indo-European, and Turkic-speaking peoples from pre-Islamic to the present. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered alternate two year cycle with HIS 253.

### **HIS 253 -254 History of Asian Civilizations I-II (3 Cr.) (3 Cr.)**

Surveys the civilizations of Asia from their origins to the present. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered alternate two year cycle with HIS 251-252.

### **HIS 267 The Second World War (3 Cr.)**

Examines causes and consequences of the Second World War. Includes the rise of totalitarianism, American neutrality, military developments, the home fronts, diplomacy and the decision to use the atomic bomb. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HIS 268 The American Constitution (3 Cr.)**

Analyzes the origin and development of the United States Constitution. Includes the evolution of civil liberties, property rights, contracts, due process, judicial review, federal-state relationships, and corporate-government relations. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HIS 269 Civil War and Reconstruction (3 Cr.)**

Studies factors that led to the division between the States. Examines the war, the home fronts, and the era of Reconstruction. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Course Generally offered spring.

### **HIS 276 United States History Since World War II (3 Cr.)**

Investigates United States history from 1946 to the present, studying both domestic developments and American involvement in international affairs. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

## **Hotel-Restaurant Mgmt (HRI)**

### **HRI 154 Principles of Hospitality Management (3 Cr.)**

Presents basic understanding of the hospitality industry by tracing the industry's growth and development, reviewing the organization and management of lodging, food, and beverage operations, and focusing on industry opportunities and future trends. Lecture 3 hours per week. Generally offered fall.

### **HRI 190 Coordinated Internship (2 Cr.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Lecture 2 hours. Generally offered spring.

### **HRI 255 Human Res. Mgmt, and Trng. for Hospi. and Tourism (3 Cr.)**

Prepares the students for interviewing, training and developing employees. Covers management skills (technical, human, and conceptual) and leadership. Covers the establishment and use of effective training and evaluative tools to improve productivity. Emphasizes staff and customer relations. Lecture 3 hours per week. Generally offered spring.

## **Human Services (HMS)**

### **HMS 100 Introduction to Human Services (3 Cr.)**

Introduces human service agencies, roles and careers. Presents an historical perspective of the field as it relates to human services today. Additional topics include values clarification and needs of target populations. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HMS 121 Basic Counseling Skills I (3 Cr.)**

Develops skills needed to function in a helping relationship. Emphasizes skills in attending, listening and responding. Clarifies personal skill strengths, deficits and goals for skill improvement. *Prerequisites: Readiness to enroll in ENG 111 and HMS 100.* Lecture 3 hours per week.

### **HMS 121 Basic Counseling Skills I (3 Cr.)**

Develops skills needed to function in a helping relationship. Emphasizes skills in attending, listening and responding. Clarifies personal skill strengths, deficits and goals for skill improvement. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week.

## Course Descriptions

### **HMS 141 Group Dynamics I (3 Cr.)**

Examines the stages of group development, group dynamics, the role of the leader in a group, and recognition of the various types of group processes. Discusses models of group dynamics that occur as a result of group membership dynamics.

### **HMS 290 Coordinated Internship (3 Cr.)**

Supervises on-the-job training in selected business, industrial or service firms coordinated by the college. Prerequisites: *ENG 111, HMS 100, HMS 121, 2 HMS/SOC/PSY electives, instructor permission.*

## **Humanities (HUM)**

### **HUM 100 Survey of the Humanities (3 Cr.)**

Introduces the humanities through art, literature, music and philosophy of various cultures and historical periods. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HUM 195 Leadership Development (3 Cr.)**

This course is designed to provide emerging and existing leaders the opportunity to explore the concept of leadership and to develop and improve their leadership skills. The course integrates readings from the humanities, experiential exercises, films, and contemporary readings on leadership. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HUM 195 Cultural Literacy (3 Cr.)**

Develops in students a broader knowledge of the people, places, and events necessary for an educated understanding of allusions. The focus will be on the wider comprehension of all college material with the emphasis on critical reading to the goal of effective understanding of orally presented class material. Content learned will serve as a road base of understanding that should precede all Humanities classes. The use of allusions in these classes is a viable teaching strategy that enables a deeper, clearer understanding of contexts. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week.

### **HUM 201 Survey of Western Culture I (3 Cr.)**

Studies thought, values and arts of Western culture, integrating major developments in art, architecture, literature, music and philosophy. Covers the following periods: Ancient and Classical, Early Christian and Byzantine, Medieval and early Renaissance. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

### **HUM 202 Survey of Western Culture II (3 Cr.)**

Studies thought, values and arts of Western culture, integrating major developments in art, architecture, literature, music and philosophy. Covers the following periods: Renaissance, Baroque, Enlightenment, Romantic and Modern. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

### **HUM 211-212 Survey of American Culture I-II (3 Cr.) (3 Cr.)**

Examines elements of our national culture as they evolved from the first European explorations through colonization and independence to the present day. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HUM 215 Native American Culture (3 Cr.)**

Surveys the cultural history of Native (Indian) peoples in the Americas from the pre-Columbian era until the present. Studies history, religion, literature, arts, life-ways and world-views which comprise the diverse traditions of Native peoples. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HUM 218 Survey of Horror (3 Cr.)**

Surveys and analyzes the horror genre, focusing on the psychological, anthropological, and historical background of monsters. Acquaints students with recurring horror themes in literature, art, and popular culture from around the world. Fluency in Standard American English. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HUM 241-242 Interdisciplinary Principles of the Humanities I-II (3 Cr.) (3 Cr.)**

Integrates unifying principles of the humanities and related fields of study. Emphasizes the expansion of student's intellectual perspective and development of concepts enabling the integration of knowledge from diverse fields into a unified whole. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HUM 260 Survey of Twentieth-Century Culture (3 Cr.)**

Explores literature, visual arts, philosophy, music and history of our time from an interdisciplinary perspective. Prerequisite: *Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **HUM 295 Topics In (3 Cr.)**

Provides an opportunity to explore topical areas of interest to or needed by students. May be used also for special honors course. Prerequisite: *Readiness to enroll in ENG 111.* May be repeated for credit. Variable hours 1-5 credits. Offered periodically.

## Course Descriptions

### **HUM 295 Phi Theta Kappa Honors Seminar (1 Cr.)**

Explores honors topic selected annually by Phi Theta Kappa, the national honor society for two-year colleges. Presents varied faculty viewpoints and encourages students to research and present individual aspects of a topic. Offered for honors credit. Students may enroll more than once. Faculty permission required. *Prerequisite: Completion of ENG 112 and cumulative GPA of 3.2 or higher.* Lecture 1 hour per week. Generally offered spring.

### **Industrial Engineering Tech (IND)**

#### **IND 145 - Introduction to Metrology (3 Cr.)**

Studies principles of measurement and calibration control, application of statistics to measurement processes, and standards of measurements in calibration. May include the use of gauges and instruments in modern production and dimensional control concepts. *Prerequisite: MTH 158 or MTH 115 or any higher level math.* Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week. Generally offered spring.

### **Information Technology Design and Database (ITD)**

#### **ITD 110 Web Page Design I (3 Cr.)**

Stresses a working knowledge of Web site designs, construction and management using HTML or XHTML. Course content includes headings, lists, links, images, image maps, tables, forms and frames. *Prerequisite: Readiness to enroll in ENG 111 and ITE 115 (or equivalent) strongly recommended.* Lecture 3 hours per week. Generally offered fall.

#### **ITD 112 Designing Web Page Graphics (3 Cr.)**

Explores the creation of digital graphics for Web design. Basic design elements such as color and layout will be explored utilizing a computer graphics program(s). *Prerequisites: Readiness to enroll in ENG 111. ITD 110 (or equivalent) strongly recommended.* Lecture 3 hours per week. Generally offered spring.

#### **ITD 130 Database Fundamentals (3 Cr.)**

Introduces the student to Relational Database and Relational Database theory. Includes planning, defining and using a database; table design, linking and normalization; types of databases, database description and definition. *Prerequisite: Readiness to enroll in ENG 111. ITE 115 (or equivalent) strongly recommended.* Lecture 3 hours per week. Generally offered fall; occasionally summer.

#### **ITD 132 Structured Query Language (3 Cr.)**

Incorporates a working introduction to commands, functions and operators used in SQL for extracting data from standard databases. *Prerequisite: Readiness to enroll in ENG 111 and ITD 130.* Lecture 3 hours per week. Generally offered fall.

#### **ITD 134 PL/SQL Programming (3 Cr.)**

Presents a working introduction to PL/SQL programming with the Oracle RDBMS environment. Includes PL/SQL fundamentals of block program structure, variables, cursors and exceptions and creation of program units of procedures, functions, triggers and packages. *Prerequisites: Readiness to enroll in ENG 111 and ITP 100 and ITD 130.* Lecture 3 hours per week. Generally offered fall or spring.

#### **ITD 210 Web Page Design II (3 Cr.)**

Incorporates advanced techniques in Web site planning, design, usability, accessibility, advanced site management and maintenance utilizing Web editor software(s). *Prerequisites: Readiness to enroll in ENG 111 and ITD 110.* Lecture 3 hours per week. Generally offered spring.

#### **ITD 250 Database Architecture and Administration (3 Cr.)**

Involves in-depth instruction about the underlying architecture of databases and the handling of database administration. *Prerequisites: Readiness to enroll in ENG 111 and ITD 130 and ITD 132 or ITD 134.* Lecture 3 hours per week. Generally offered fall.

### **Information Technology Essentials (ITE)**

#### **ITE 115 Introduction to Computer Applications and Concepts (3 Cr.)**

Covers computer concepts and Internet skills and use of a software suite which includes word processing, spreadsheet, database and presentation software to demonstrate skills required for computer literacy. *Prerequisites: Readiness to enroll in ENG 111 and AST 101 or equivalent highly recommended.* Lecture 3 hours per week. Generally offered all semesters.

#### **ITE 119 Information Literacy (3 Cr.)**

Presents the information literacy core competencies focusing on the use of information technology skills. Skills and knowledge will be developed in database searching, computer applications, information security and privacy, and intellectual property issues. *Prerequisites: Readiness to enroll in ENG 111 and AST 101 or equivalent highly recommended.* Lecture 3 hours per week. Generally offered fall and spring.

## Course Descriptions

### **ITE 120 Principles of Information Systems (3 Cr.)**

Provides an overview of the fundamentals of computer information systems. Focuses on the role of computers in business today including hardware, software, analysis, design and implementation of information systems. Includes an introduction to computer ethics, and business and personal security. Exposes students to techniques used in programming and system development. Utilizes a hands-on component for spreadsheets, databases, and Web design applications. *Prerequisite: Readiness to enroll in ENG 111. ITE 115 recommended.* Lecture 3 hours per week. Generally offered spring; occasionally summer.

### **Information Technology Networking (ITN)**

#### **ITN 101 Introduction to Network Concepts (3 Cr.)**

Provides instruction in networking media, physical and logical topologies, common networking standards and popular networking protocols. Emphasizes the TCP/IP protocol suite and related IP addressing schemes, including CIDR. Includes selected topics in network implementation, support and LAN/WAN connectivity. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered summer and fall.

#### **ITN 106 Microcomputer Operating Systems (3 Cr.)**

Teaches use of operating system utilities and multiple-level directory structures, creation of batch files and configuration of microcomputer environments. May include a study of graphical user interfaces. Maps to A+ Software Certification. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered spring.

#### **ITN 107 Personal Computer Hardware and Troubleshooting (3 Cr.)**

Includes specially designed instruction to give students a basic knowledge of hardware and software configurations. It includes the installation of various peripheral devices as well as basic system hardware components. Maps to A+ Hardware Certification. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered fall.

#### **ITN 109 Internet and Network Foundation (3 Cr.)**

Provides a basic comprehension of Internet and network technologies including IT job roles, connection methods, TCP/IP functionality and DNS. Explores web server technologies with security and project management concepts. Introduces network creation, physical and logical topologies including media properties, server types, IP addressing and network security. Lecture 3 hours. Total 3 hours per week. Generally offered summer and fall.

### **ITN 120 Wireless - Network Administration (WNA) (3 Cr.)**

Provides instruction in fundamentals of wireless information systems. Course content includes terms, standards, components, and operating requirements in the design and implementation of wireless networks. Lecture 3 hours per week. Generally offered spring.

### **ITN 170 Linux System Administration (3 Cr.)**

Focuses instruction on the installation, configuration and administration of the Linux operating system and emphasizes the use of Linux as a network client and workstation. *Prerequisites: Readiness to enroll in ENG 111 and ITN 106.* Lecture 3 hours per week. Generally offered spring.

### **ITN 200 Administration of Network Resources (3 Cr.)**

Focuses on the management of local area network servers. Teaches proper structuring of security systems. Explains print queues, disk management and other local area network (LAN) issues. Presents concerns and issues for the purchase and installation of hardware and software upgrades. Can be taught using any network operating system or a range of operating systems as a delivery tool. *Prerequisites: Readiness to enroll in ENG 111, ITN 106 and ITN 101.* Lecture 3 hours per week. Generally offered fall.

### **ITN 260 Network Security Basics (3 Cr.)**

Provides instruction in the basics of network security in depth. Course content includes security objectives, security architecture, security models and security layers. Course content also includes risk management, network security policy and security training. Course content includes the give security keys, confidentiality integrity, availability, accountability and auditability. *Prerequisites: Readiness to enroll in ENG 111 and ITN 101. Networking background highly recommended.* Lecture 3 hours per week. Generally offered summer and fall.

### **ITN 261 Network Attacks, Computer Crime and Hacking (3 Cr.)**

Encompasses in-depth exploration of various methods for attacking and defending a network. Course content explores network security concepts from the viewpoint hackers and their attack methodologies. Course content also includes topics about hackers, attacks, Intrusion Detection Systems (IDS) malicious code, computer crime and industrial espionage. *Prerequisites: Readiness to enroll in ENG 111 and ITN 260. Networking background required.* Lecture 3 hours per week. Generally offered fall.





































## Course Descriptions

### **REL 237 Eastern Religion (3 Cr.)**

Studies major religious traditions of the East, including Hinduism, Buddhism, Confucianism, Taoism, and Zen Buddhism. Includes an analysis of Eastern philosophy and approach to life. Lecture 3 hours per week. Offered periodically.

### **REL 240 Religions in American (3 Cr.)**

Surveys various manifestations of religion in the American experience. Emphasizes concepts, problems, and issues of religious pluralism and character of American religious life. Lecture 3 hours per week. Offered periodically.

## **Sociology (SOC)**

### **SOC 200 Principles of Sociology (3 Cr.)**

Introduces fundamentals of social life. Presents significant research and theory in areas such as culture, social structure, socialization, deviance, social stratification and social institutions. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered all semesters.

### **SOC 210 Survey of Physical and Cultural Anthropology (3 Cr.)**

Examines physical characteristics and lifestyles of human ancestors and present populations. Explores cultures from around the world to study diverse adaptations made by humans. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Offered periodically.

### **SOC 211-212 Principles of Anthropology I-II (3 Cr.) (3 Cr.)**

Inquires into the origins, development, and diversification of human biology and human cultures. Includes fossil records, physical origins of human development, human population genetics, linguistics, cultures' origins and variation, and historical and contemporary analysis of human societies. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered fall and spring.

### **SOC 215 Sociology of the Family (3 Cr.)**

Studies topics such as marriage and family in social and cultural context. Addresses the single scene, dating and marriage styles, child-rearing, husband and wife interaction, single parent families, alternative lifestyles. Lecture 3 hours per week.

### **SOC 225 Sociology of Gender (3 Cr.)**

Analyzes influence of major social institutions and socialization in shaping and changing sex roles in contemporary society. Examines differential access to positions of public power and authority for men and women. Ability to read in English at the college level. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours.

### **SOC 266 Race and Ethnicity (3 Cr.)**

Considers race and ethnicity as social constructs that deeply affect our personal experience and our social institutions. Examines the relationships of racial and ethnic groups with each other and with the larger society, and the ways in which these relationships are constantly changing. Explores the experience of different groups and examines ideas of racial justice and equality. Introduces significant theoretical approaches to the study of race and ethnicity. Ability to read in English at the college level. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours. Total 3 hours per week.

### **SOC 268 Social Problems (3 Cr.)**

Applies sociological concepts and methods to analysis of current social problems. Includes delinquency and crime, mental illness, drug addiction, alcoholism, sexual behavior, population crisis, race relations, family and community disorganization, poverty, automation, wars and disarmament. *Prerequisite: Readiness to enroll in ENG 111.* Lecture 3 hours per week. Generally offered fall.

## **Spanish (SPA)**

### **SPA 16 Spanish for Business (2 Cr.)**

Introduces the student to Spanish used in business transactions. Lecture 2 hours per week. Offered periodically.

### **SPA 101-102 Beginning Spanish I-II (4 Cr.) (4 Cr.)**

Introduces understanding, speaking, reading and writing skills and emphasizes basic Spanish sentence structure. May include an additional hour of oral drill and practice per week. *Prerequisite: SPA 101 for SPA 102.* Lecture 4 hours per week. Generally offered all semesters.

### **SPA 195 Spanish for Health Professionals-Study Abroad Program (4 Cr.)**

This is a beginning Spanish Study Abroad course geared for students pursuing a career in the healthcare profession. This course will take place in Salamanca, Spain.

### **SPA 201-202 Intermediate Spanish I-II (3 Cr.) (3 Cr.)**

Continues to develop understanding, speaking, reading and writing skills. May include oral drill and practice. *Prerequisite: SPA 102 or equivalent for SPA 201, SPA 201 for SPA 202.* Lecture 3 hours per week. Generally offered all semesters.

### **SPA 271-272 Intro to Latin American Civ. Literature I-II (3 Cr.) (3 Cr.)**

Introduces the student to Latin American culture and literature. Readings and discussions conducted in Spanish. *Prerequisites: Readiness to enroll in ENG 111 and SPA 202 or equivalent.* Lecture 3 hours per week. Offered periodically.

## Course Descriptions

### **Student Development (SDV)**

#### **SDV 100 College Success Skills (1 Cr.)**

Assists students in transition to colleges. Provides overviews of college policies, procedures, curricular offerings. Encourages contacts with other students and staff. Assists students toward college success through information regarding effective study habits, career and academic planning and other college resources available to students. May include English and Math placement testing. Strongly recommended for beginning students. Required for graduation. Lecture 1 hour per week. Generally offered all semesters.

#### **SDV 101 Orientation to Education Professions (1 Cr.)**

Introduces students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center; counseling and advising; listening, test taking and study skills; and topical areas which are applicable to their particular discipline. Lecture 1 hour per week. Generally offered fall and spring.

#### **SDV 101 Orientation to Health Information Management (1 Cr.)**

Introduces students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center; counseling and advising; listening, test taking and study skills; and topical areas which are applicable to their particular discipline. Lecture 1 hour per week. Generally offered fall.

#### **SDV 101 Orientation to Health Professions (1 Cr.)**

Introduces students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center; counseling and advising; listening, test taking and study skills; and topical areas which are applicable to their particular discipline. Lecture 1 hour per week. Generally offered all semesters.

#### **SDV 101 Orientation for International and Adult Immigrant Students (3 Cr.)**

Introduces international students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college, including the learning resource center; counseling and advising listening, test taking and study skills. Lecture 3 hour per week. Generally offered all semesters.

#### **SDV 101 Orientation to IT Professions (1 Cr.)**

Introduces students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center; counseling and advising; listening, test taking and study skills; and topical areas which are applicable to their particular discipline. *Prerequisite: Enrollment in IST degree or one of the IT-related career studies certificates. Students not currently enrolled in either the IST degree or one of the IT-related career studies certificates, may enroll with instructor permission.* Lecture 1 hour per week. Generally offered all semesters.

#### **SDV 101 Orientation to Trades (1 Cr.)**

Introduces students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center; counseling and advising; listening, test taking and study skills; and topical areas which are applicable to their particular discipline. Lecture 1 hour per week. Generally offered all semesters.

#### **SDV 101 Orientation to Virtual Assistant (1 Cr.)**

Introduces students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center; counseling and advising; listening, test taking and study skills; and topical areas which are applicable to their particular discipline. Lecture 1 hour per week. Generally offered fall.

#### **SDV 101 Orientation to Visual Arts (1 Cr.)**

Introduces students to the skills which are necessary to achieve their academic goals, to services offered at the college and to the discipline in which they are enrolled. Covers topics such as services at the college including the learning resources center; counseling and advising; listening, test taking and study skills; and topical areas which are applicable to their particular discipline. Lecture 1 hour per week. Generally offered fall and spring.

#### **SDV 298 PLACE Portfolio Development (3 Cr.)**

Portfolio development course designed to assist students in the process of synthesizing and organizing life experience with the objectives of specific other courses. Generally offered all semesters.

## Course Descriptions

### **Surgical Tech (SUR)**

#### **SUR 130 Introduction to Central Services (3 Cr.)**

Introduces central processing with a focus on skills necessary to perform central services competently and safely. Includes aseptic technique, patient-centered theories, decontamination, preparation and packaging for sterilization, sterilization processes, and sterile storage.

*Prerequisite: Qualifying Placement Test scores.* Lecture 2 hours. Lab 3 hours. Total 5 hours per week. Generally offered fall.

#### **SUR 135 Infection Control (2 Cr)**

Introduces the fundamentals of surgical microbiology. Topics include: historical development of microbiology, cell structure and theory, microbial function, human and pathogen relationships, infectious process, blood borne and airborne pathogens, defense microorganisms, infection control and microbial control and destruction. *Prerequisites: Admission into the program; SUR 93.* Lecture 2 hours per week. Generally offered fall.

#### **SUR 140 Introduction to Surgical Care (4 Cr.)**

Introduces the study of the surgical process, including aspects of the operating room environment. Highlights preparing the patient for surgery, including transporting, positioning and special preparation procedures. Presents physical, psychological and spiritual needs of the patient including ethical and legal rights of the patient. *Prerequisite: Admission into the program. Corequisite: BIO 141.* Lecture 2 hours per week. Laboratory 3-6 hours per week. Total 5-6 hours per week. Generally offered fall.

#### **SUR 145 Fundamentals of Surgical Care (4 Cr.)**

Introduces principles of aseptic technique, sterilization, disinfection and antisepsis including environmental safety and control, CDC and OSHA requirements. Presents packaging, storing, and dispensing surgical supplies, principles of wound healing including types, stages, and complications; types, preparation and care of surgical supplies, packing, dressings, catheters, drains, tubes, supplies, and equipment; classifications of instruments, sutures and needles. Describes responsibilities related to the scrub and circulating roles. Provides students practical experience in the operating room. *Prerequisite: NUR 140. Corequisite: BIO 141.* Lecture 2 hours. Laboratory 3-6 hours. Total 5-8 hours per week. Generally offered fall.

#### **SUR 210 Surgical Procedures (8 Cr.)**

Introduces the surgical specialties of general gastroenterology, gynecology; genitourinary, ophthalmology; EENT; dental; oral and maxillofacial; plastic and reconstructive; pediatrics; oncology; neurosurgery; orthopedics; cardiac; thoracic; vascular; transplant; and trauma in a laboratory and clinical experience. *Prerequisite: SUR 140, SUR 145. Corequisites: BIO 141, BIO 142.* Lecture 4 hours per week. Laboratory 12-15 hours per week. Total 16-19 hours per week. Generally offered spring.

#### **SUR 230 Clinical Applications (5 Cr.)**

Provides extensive clinical experience in all central sterilization areas, in addition to instruction and practice in areas such as selecting instruments, equipment, and supplies; using proper procedures; identifying regulations, standards, and safety. Lecture 1 hour. Lab 12 hours. Total 13 hours per week.

#### **SUR 235 Fundamentals of Central Services (3 Cr.)**

Builds upon introductory concepts and skills to include areas such as cleaning, disinfection, sterilization of instruments and equipment, instrument processing, inventory management, safety and quality assurance, professional development and healthcare trends. *Prerequisite: Admission into the program.* Lecture 2 hours. Lab 3 hours. Total 5 hours per week. Generally offered spring.

#### **SUR 250 Surgical Pharmacology (2 Cr.)**

Introduces pharmacology as it relates to surgical intervention in the operating room. Includes medication calculations, measurements, administration, terminology and handling and a review of certain drug classifications as they relate to surgical patients. (Note: Previously listed as HLT 250, General Pharmacology). *Prerequisite: SUR 140.* Lecture 2-3 hours per week. Generally offered spring.

#### **SUR 260 Surgical Technology Clinical Practicum (6 Cr.)**

Provides continued study and extensive clinical experience in all surgical specialties. Emphasis is on clinical practice thereby further enhancing theoretical and practical knowledge of select procedures, surgical instrumentation, supplies and equipment. The scrub and circulating roles of the surgical technologist including aseptic technique and case preparation for select surgical procedures continue to be emphasized. *Prerequisite: SUR 140, SUR 145, SUR 210. Corequisite: BIO 141-142, HIM 111.* Laboratory 18 hours per week. Generally offered summer.



## *Course Descriptions*

### **SUR 296 On-site Training (3 Cr.)**

Specializes in career orientation and training program without pay in selected business and industry, supervised and coordinated by the college. Credit/work ration not to exceed 1:5 hours. May be repeated for credit.

Generally offered spring.

### **Welding (WEL)**

#### **WEL 120 Introduction to Welding (3 Cr.)**

Introduces history of welding processes. Covers types of equipment and assembly of units. Stresses welding procedures such as fusion, non-fusion and cutting oxyacetylene. Introduces arc welding. Emphasizes procedures in the use of tools and equipment.

Lecture 1-2 hours per week. Laboratory 2-3 hours per week. Total 3-5 hours per week. Generally offered fall semester.

#### **WEL 130 Inert Gas Welding (3 Cr.)**

Introduces practical operations in use of inert gas shielded arc welding. Studies equipment operation, setup, safety and practice of Gmaw (Mig) and

Gtaw (Tig). Lecture 1 hour per week. Laboratory 3 hours per week. Total 4 hours per week.

Generally offered spring semester.