

**A 101 Art Appreciation** 3  
This course is an introduction to the fundamentals of the visual arts. The course focuses on the importance of art in the contemporary world as well as the historical aspects of art and its influence on Western culture today.

**A 103 2-D Design** 3  
This course provides an introductory study of the elements and principles of two-dimensional design. Emphasis will be placed on two-dimensional spatial organization. A variety of materials and approaches will be explored and applied.

**A 104 3-D Design** 3  
This studio design course covers the elements and principles of three-dimensional design. Course projects will deal with the linear and planar aspects of 3-D design as well as the structural concepts of volume, mass, and form.

**A 105 Prints I** 3  
This course provides an introduction to the tools, methods, and techniques used in intaglio and relief printing processes. Emphasis will be placed on the variety of ways to create an intaglio plate, such as etching, soft mezzotint, engraving, aquatint, and drypoint. Relief processes such as linocut and woodcut will also be included.

**A 107 Drawing I** 3  
This course will cover the fundamentals of drawing as applied to the realistic and expressive representation of objects through the use of various media, approaches, and techniques. Emphasis will be placed on composition, line, value, texture, and spatial relationships.

**A 108 Drawing II** 3  
This class continues the investigation of various drawing media with an emphasis on creative expression. The course will cover techniques as well as compositional problems. Subject matter will include still life, landscape, the figure, and invented compositions.  
*PreReq: A 107*

**A 110 Painting I** 3  
This course will provide a brief history of painting and an introduction to the color wheel and various painting techniques. The course will emphasize the use of oil and acrylic paint, and projects will deal with line, color, form, texture, and space in both representational and non-objective subject matter.

**A 111 Painting II** 3  
This course will provide a continuation of Painting I concepts and will also emphasize individual expression and exploration.  
*PreReq: A 110*

**A 112 Ceramics I** 3  
This course will provide an introduction to the use of clay as an art medium. The course will cover traditional techniques used in hand-building and wheel thrown forming methods and will also introduce ceramic glazes, slips, stains, and firing methods.

**A 113 Typography** 3  
This course will provide a study of the principles of contemporary typographic design. The course will focus on size, form, contrast, color, spacing, and design of the printed word and printed page. Typography production from traditional letterpress through photomechanical processes will also be discussed. The course will provide an introduction to the Macintosh computer and the latest graphic design software.

**A 117 Ceramics II** 3  
This course continues the instruction and skill building begun in Ceramics I. The course will emphasize the development of sound clay design and form and will cover contemporary hand-building and throwing techniques, as well as kiln firing and glaze formulation.  
*PreReq: A 112*

**A 121 Design Software Applications** 3  
This course provides an introduction to computer hardware, software, and peripherals commonly used by graphic designers and professional artists. Students will complete projects using graphic design software.

**A 123 Design Software Applications** 3  
This course introduces students to the use of digital technology using state-of-the-art computer illustration software. Projects will incorporate use of the Macintosh computer for digital imaging and manipulation, as well as image editing, scanning, and printing.

**A 139 Computer Graphics -Web Design** 3  
This course provides an introduction to basic web page and site design. The course will focus on applying strong design principles to create effective page and site projects using Macintosh computers and web design software.  
*PreReq: A121*

**A 201 Art History I** 3  
This course provides an introductory survey of the art and architecture of the Western world from Prehistoric times through the Early Renaissance. Because of the extensive time period and the number of civilizations being examined, the course will focus on art objects and monuments that are most representative and significant for each historical period. A broad range of art forms will be examined, including monumental architecture, sculpture, ceramics, paintings (including frescoes, mosaics, and manuscripts), textiles, and metalwork.

**A 202 Art History II** 3  
This course provides an introductory survey of the art and architecture of the Western world from the Renaissance through Modern periods, ending with a survey of trends in contemporary American and European art. The course will explore the relationships between the art periods and styles as well as the achievements of individual artists. Because of the extensive time period and the number of cultures and styles being examined, the course will focus on art objects and monuments that are most representative and significant for each historical period. A broad range of art forms will be examined, including monumental architecture, sculpture,

## CATALOG COURSE LISTING WITH PREREQUISITES

ceramics, paintings (including frescoes, mosaics, and manuscripts), textiles, and metalwork.

**A 205 Art Methods** 3  
This course will focus on the principles and practices of teaching art to children from preschool through middle school.

**A 215 Graphic Design** 3  
This course covers the resources, materials, and procedures of graphic design. The course will provide an introduction to problem solving, basic layout skills, and graphic design terminology. An introduction to the Macintosh computer with the latest graphic software will be included. Projects will emphasize color, form, and typography.

**A 223 Computer Graphics - Illustration** 3  
This course provides an introduction to contemporary illustration practice, including the use of traditional drawing, painting, and print-making techniques supplemented with digital manipulation using the most recent version of Adobe Illustrator and Adobe Photoshop. The course also covers hand rendering, computer rendering, scanning, digital tablet use, image manipulation, and printing. The course will also focus on a client based approach to image creation, emphasizing the development of concepts and ideas concluded by finished images. *PreReq: None, A 103 or A 121 recommended*

**A 224 Computer Graphics - Enhanced Photography** 3  
This course provides experience in the use of high-tech enhanced photography software. Course projects will incorporate use of Macintosh computers and Adobe Photoshop software for digital imaging and manipulation as well as image editing, scanning, and printing.

**A 240 Art Seminar** 1  
This course is designed for students interested in research, discussion, and studio experience in various media within academic or vocational areas such as art education, art therapy, computer graphics, graphic design, interior design, and studio art. *PreReq: Sophomore standing*

**A 250 Advanced Studio I** 1  
This studio course is designed for the student with an interest in fine arts. The course will allow students to explore the possibilities of self-expression with media and materials of their own choosing. *PreReq: Any previous studio course*

**A 251 Advanced Studio II** 1  
This studio course is designed for the student with an interest in fine arts. The course will allow students to explore the possibilities of self-expression with media and materials of their own choosing. *PreReq: A 250*

**A 252 Advanced Studio III** 1  
This studio course is designed for the student with an interest in fine arts. The course will allow students to explore the possibilities of self-expression with media and materials of their own choosing. *PreReq: A 251*

**A 253 Advanced Studio IV** 1  
This studio course is designed for the student with an interest in fine arts. The course will allow students to explore the possibilities of self-expression with media and materials of their own choosing. *PreReq: A 252*

**A 260 Portfolio Preparation** 1  
This course is intended to provide students with the skills and knowledge to design and prepare a portfolio that can be used for college admissions or scholarship applications as well as for pursuing employment opportunities. *Pre Req: Sophomore standing*

**AB 101 Small Scale Local Food Production** 3  
This course will cover garden practices as they relate to food production. Fruit and vegetables will be raised in a College garden site. The course will specifically cover the principles of plant growth, garden planning, soil preparation, planting and tending crops, marketing, and processing garden produce.

**AB 108 Principles of Animal Science** 3  
This course will provide an introduction to the field of animal science. The course will focus on fundamental concepts of genetics, animal breeding, physiology, anatomy, nutrition, digestion, and the scope of the livestock industry. *PreReq: AB 114 or permission*

**AB 114 Orientation** 2  
This course will provide an introduction to the various careers in agriculture. The course will also cover career and job trends, setting academic goals, note taking, designing a term study plan, preparing for tests, and test taking strategies and skills.

**AB 120 Introduction to Beekeeping** 3  
This course will provide an introduction to the basics of beekeeping. The course will cover equipment and supplies necessary for setting up an apiary, appropriate apiary locations, installing a colony of bees, and checking the progress of a colony.

**AB 121 Honey Products Development & Marketing** 3  
This course is designed to provide an introduction to the legal requirements of honey product packaging and quality control of the product. The course will also cover packaging and marketing strategies to maximize profits. Other value-added products will be introduced for diversification of sales possibilities.

**AB 122 Colony Health & Treatment of Disease** 1  
This course is designed to provide an introduction to the recognition, diagnosis, and treatment of honeybee diseases and pests. The course will also cover preventative maintenance methods for general colony health.

**AB 123 Spring Apiary Management** 2  
This course is designed to provide an introduction to the basics of spring apiary management. The course will cover preparing colonies for spring honey production, promoting colony health, and increasing the number of colonies.

**AB 124 Beekeeping Equipment Construction 1**  
This course will provide a hands-on learning experience in making a complete beehive from wood. The course will also cover assembling pre-made beehive components. *PreReq: Permission*

**AB 126 Principles of Agronomy 3**  
This course will provide instruction in crop plant classification, use, and identification. The course also covers cropping systems, tillage methods, planting methods, harvesting methods, and crop growth patterns. Course emphasis will be balanced between theoretical and practical crop science.

**AB 128\* Agriculture Electronic Devices/System 3**  
This course is designed for students with basic electrical knowledge and will provide information on how agribusiness and industrial machines are controlled. The course will cover basic concepts, such as 2 and 3 wire control systems, as well as more complex systems, including the applications and limitations of Programmable Logic Controllers (PLCs). Applications of this technology and the language of how to read and understand ladder diagrams and wiring diagrams will also be emphasized.

**AB 130\* Precision Farming Systems 3**  
This course presents an overview of precision farming concepts and the tools of precision farming (Global Positioning System, Geographic Information System, and Intelligent Devices and Implements). The course will provide experience using these tools within the processes of a precision farming system, and hands-on activities with local data will be included. Economic and environmental benefits are also covered.

**AB 132\* Advanced Precision Farming Systems 3**  
This course will cover the use of precision farming software, including initial setup, creating management and production lists, saving and unloading data cards, and processing field data. The course will also cover using the software to create reports and prescription/application maps. Deere Apex, Ag Leader Spatial Management System, and FarmWorks SiteMate will be the packages used. This is a project driven course in which the instructor will provide guidance, with students required to read software documentation to complete most of the tasks.

**AB 134\* Advanced Precision Farming Hardware 3**  
This course will cover the use of various precision farming hardware components. The course will include basic concepts of electricity, electronics, hydraulics, and pneumatics and will provide hands-on experience in the installation of display modules, Global Positioning System (GPS) units, and control components. This is a project driven course which requires students to use technical manuals for installations. Systems used for the course will include Deere Greenstar, Deere StarFire Real Time Kinematics (RTK), Ag Leader guidance, Case IH yield monitoring, and Rawson variable rate hydraulic unit.

**AB 136\* Geographic Information Systems 3**  
This course covers fundamental concepts and theories from the geospatial, cartographic, and computing sciences relevant to the emergence, use, and development of Geographic Information Systems (GIS). The course will focus on GIS, Global Positioning Systems (GPS), and remote sensing as well as spatial data production, analysis, and management. The course will combine a review of theoretical foundations with hands-on practical exercises in collecting, analyzing, and producing geospatial and attribute information.

**AB 138\* Remote Sensing 3**  
This course will cover the concepts of radiometric and photometric measurements: propagation, irradiance, radiance, radiant intensity, luminance, and radiant existence. Calibration and characteristics of remote sensing data and data analysis techniques will be included. The course will also focus on the interaction between electromagnetic radiation and matter and the effects of the atmosphere on light propagation and remote sensing experiments. Class work will include laboratory and teamwork exercises and will also provide practical experience in the technical workplace.

**AB 142\* Mapping for Decision Making 3**  
This intermediate course focuses on the concepts and procedures used in discovering and applying the spatial relationships within and among maps. The course applies the mapping and geo-query capabilities of Geographic Information System (GIS) technology to map analysis and construction of spatial models. The course also provides a comprehensive framework that addresses a wide range of applications from natural resources to geo-business.

**AB 144\* Intermediate GIS 3**  
This course will cover advanced topics and current techniques in Geographic Information Science (GISci). The course will emphasize both theory and practice and will go beyond the development of geographic mapping technology to focus on integrated systems. The course will cover data models, spatial data quality and uncertainty modeling, network analysis and modeling, digital terrain modeling, spatial interpolation, 3-D mapping and visualization, mobile Geographic Information System (GIS) mapping, and Internet GIS.

**AB 146\* Aerial Systems Management 2**  
This course introduces Unmanned Aerial Systems (UAS) platforms, their history, and commercial applications, with special emphasis in Precision Agriculture, Federal Aviation Administration (FAA) regulatory framework, data collection, privacy issues, and navigation concepts. Although instruction will cover content that is needed to pass the certification test for flying drones, no certification will be awarded as part of this class in the actual flight of unmanned aerial vehicles. Further training and instruction will be required for students wishing to acquire and/or pilot aerial vehicles, and students will be responsible for pursuing that certification through testing.

**AB 148\* Positioning Systems Management 3**  
The Global Navigation Satellite System (GNSS) is a worldwide, satellite-based navigation system used for aviation, remote sensing, shipping, vehicle tracking, surveying, time transfer, search and rescue operations, and personal communications via satellite. This course provides an introduction to this rapidly growing field,

*\*indicates a technical course*

## CATALOG COURSE LISTING WITH PREREQUISITES

covering both applications and the technology that makes satellite navigation possible. It is by nature an interdisciplinary course, covering subject material in orbit prediction, satellite systems, signal processing, error modeling, computer programming, digital and microwave electronics.

**AB 202 Agriculture Economics I** 3  
This course provides an introduction to the field of agricultural economics as well as some of the basic tools and concepts of decision making. Concepts are illustrated in terms of selected contemporary social and economic issues, including the role of agriculture in both the national and international dimensions. Topics will include the structure of U.S. agriculture, consumer food issues, world food problems, agribusiness, and rural development.

**AB 203 Soils and Soils Lab** 4  
This course will provide a study of the physical, chemical, and biological properties of soils and how these properties determine the nature of each soil and its crop productivity. The course will also cover soil management practices. *PreReq: AB 210, PS 111 or 2 years high school chemistry or permission*

**AB 207 Fundamentals of Animal Nutrition** 3  
This course covers the role of carbohydrates, proteins, lipids, minerals, vitamins, and water in animal nutrition. The course will emphasize digestion, absorption, metabolism, and excretion of nutrients and their metabolites. *PreReq: AB 108 or permission*

**AB 208 Applied Animal Nutrition** 3  
This advanced course will cover various techniques involved in the formulation, preparation, and construction of animal nutrient rations. *PreReq: AB 207 or permission*

**AB 210 Crop Science** 4  
This course will examine plant morphology and anatomy and will also provide a history of plant agriculture. The course will emphasize plant structures and systems related to the five major field crops found in the local region: corn, sorghum, wheat, soybeans, and alfalfa. Growth stages, critical periods of development, plant nutrition, mineral elements involved in physiology, and grain grading and marketing will also be covered. *PreReq: PS 107, PS 111 or permission*

**AB 212 Livestock Production** 3  
This advanced animal science course is designed so students can expand their expertise working with livestock. The course will cover lactation, genetic applications, physiology of reproduction, animal ecology, and the impact of livestock production on the quality of life. *PreReq: AB 108 or permission*

**AB 216 Marketing Farm Products** 3  
This introductory course will cover operations involved in the movement of agricultural commodities from the farmer to the consumer. The course will focus on the essential marketing functions of buying, selling, transportation, storage, financing, standardization, pricing, and risk bearing. *PreReq: AB 202 or permission*

**AB 220 Beef Production** 3  
This course will cover the basic husbandry practices used in modern beef production. The course will focus on the latest advancements in technology as they apply to cattle production. Special emphasis will be placed on genetics, physiology of reproduction, beef nutrition, health programs, management methods, use of electronic ID systems, ID databases, and marketing methods. *PreReq: AB 108 or permission*

**AB 222 Sheep Production** 3  
This course is designed to introduce the technology required for modern sheep production. The course will focus on genetics, reproduction, health, nutrition, management concepts, marketing, budgets, and the proper care and handling of wool. *PreReq: AB 108 or permission*

**AB 224 Range Management** 3  
This course is designed to give students knowledge about forage and range management. The course will cover principles of plant species selection, establishment, fertilization, and weed control. Utilization and grazing of natural grasses will also be covered, as well as improved cultivators. The course will include discussion of intensive grazing design and temporary forage systems, silage, and haying methods. *PreReq: AB 210 or permission*

**AB 225 Animal Diseases and Health** 3  
This course will cover general concepts and applications for designing and developing an effective flock or herd health program. The course will emphasize effective sanitation, disease prevention, control of ectoparasites and endoparasites, disease identification, and methods of effective chemotherapy. *PreReq: AB 108 or permission*

**AB 227 Ag Microcomputer** 3  
This course is designed for students who have had some experience with computers. The course will cover the start-up dialogue, care and maintenance of software and hardware, and what to look for when purchasing a farm computer system. The course will also emphasize the use of integrated software packages and their agricultural applications. *PreReq: 2 years high school math or permission*

**AB 244 Applications Global Positioning Systems** 3  
The Global Positioning System (GPS) is a worldwide, satellite-based navigation system used for aviation, remote sensing, shipping, vehicle tracking, surveying, time transfer, search and rescue operations, and personal communications via satellite. This course provides an introduction to this rapidly growing field, covering both applications and the technology that makes satellite navigation possible. The focus of the course is interdisciplinary in nature, including orbit prediction, satellite systems, signal processing, error modeling, computer programming, and digital and microwave electronics.

**ACR 105\* Painting and Refinishing I** 3  
This course is the first in a four-course sequence covering all aspects of painting and refinishing auto body surfaces. The course will cover safety and health issues, surface preparation, metal treatments, equipment, and paint specifics.

**ACR 115\* Non-Structural Analysis & Damage Repair I 4**  
This course is the first in a four-course sequence covering all aspects of non-structural analysis and damage repair for automobiles. The course will cover safety issues, vehicle construction, industry opportunities, and auto body repair techniques and materials.

**ACR 125\* Structural Analysis & Damage Repair I 2**  
This course is the first in a four-course sequence covering all aspects of structural analysis and damage repair for automobiles. The course will cover measuring, damage analysis, safety, frame repair, unibody analysis, and welding.

**ACR 135\* Airbrush, Fiberglass, and Pin Striping 3**  
This course is designed to enhance skills in auto collision repair through creating detail and unique products using airbrush and pin striping techniques and fiberglass fabrication.

**ACR 155\* Painting and Refinishing II 3**  
This course is the second in a four-course sequence covering all aspects of painting and refinishing auto body surfaces. The course will cover protective equipment, shop operations, and specific painting principles and procedures. *PreReq: ACR 105*

**ACR 165\* Non-Structural Analysis and Damage Repair II 4**  
This course is the second in a four-course sequence covering all aspects of non-structural analysis and damage repair for automobiles. The course will cover trim and hardware protection, glass, outer body, metal work, welding, safety, cutting, plastics, and adhesives. *PreReq: ACR 115*

**ACR 175\* Structural Analysis and Damage Repair II 2**  
This course is the second in a four-course sequence covering all aspects of structural analysis and damage repair for automobiles. The course will cover safety, frame inspection and repair, structural damage, unibody repair, welding techniques, and cutting procedures. *PreReq: ACR 125*

**ACR 185\* Panel Fabrication 3**  
This course is designed to give students the skills needed to fabricate panels using sheet metal in order to create a finished product by replacing or repairing existing parts. *PreReq: ACR 125*

**ACR 205\* Painting and Refinishing III 3**  
This course is the third in a four-course sequence covering all aspects of painting and refinishing auto body surfaces. This more advanced course will focus on application procedures and techniques for auto body painting. *PreReq: ACR 155*

**ACR 215\* Non-Structural Analysis and Damage Repair III 4**  
This course is the third in a four-course sequence covering all aspects of non-structural analysis and damage repair for automobiles. This advanced course will cover trim and hardware, glass repair, outer body, mechanical and electrical components, safety protocol, intermediate welding skills, and plastic and adhesive repairs. *PreReq: ACR 165*

**ACR 225\* Structural Analysis and Damage Repair III 3**  
This course is the third in a four-course sequence covering all aspects of structural analysis and damage repair for automobiles. This advanced course will cover safety, welding and cutting techniques, unibody damage and repair, frame procedures, and fixed glass. *PreReq: ACR 175*

**ACR 235\* Fleet and Commercial Vehicles 3**  
This course is designed to allow students to use knowledge gained in sheet metal repair, welding, plastic repair, and painting to obtain skills in working on fleet and commercial vehicles, using tools and paint specific to the industrial field of collision repair. *PreReq: ACR 175*

**ACR 255\* Painting and Refinishing IV 4**  
This course is the final one in a four-course sequence covering all aspects of painting and refinishing auto body surfaces. This course will focus on advanced aspects, techniques, and procedures for a variety of auto body painting and refinishing applications. *PreReq: ACR 205*

**ACR 265\* Non-Structural Analysis and Damage Repair IV 5**  
This course is the final one in a four-course sequence covering all aspects of non-structural analysis and damage repair for automobiles. This course will focus on advanced aspects, techniques, and procedures for non-structural damage repair. *PreReq: ACR 215*

**ACR 275\* Structural Analysis and Damage Repair IV 3**  
This course is the final one in a four-course sequence covering all aspects of structural analysis and damage repair for automobiles. The course will focus on advanced welding and cutting techniques, unibody repair, frame repair, and fixed glass removal and installation. *PreReq: ACR 225*

**ACR 285\* Mechanical and Electrical 3**  
This course will focus specifically on auto mechanical and electrical systems and will cover inspection, diagnosis, service, and repair of system problems or damage. *PreReq: ACR 225*

**ACR 295\* Occupational Work Experience 0**  
Occupational Work Experiences are available to students who have completed at least 85% of their required course hours. This is an optional course for students wanting practical experience at local businesses or other approved sites.

**ADM 101\* Document Processing I 3**  
This course develops the student's basic typing skills and emphasizes the production of various kinds of business correspondence, tabulations, reports, and forms from unarranged and rough-draft sources.

**ADM 115\* Administrative Procedures I 3**  
This course is designed to give students knowledge about the concepts, terminology, skills, and procedures used in a business office. The course will focus on topics such as basic filing, office design, computer and office technology, business writing, and presentations.

**ADM 121\* Proofreading and Editing 3**  
This course is designed to assist students in identifying and correcting errors in abbreviations, formats, grammar, punctuation,

*\*indicates a technical course*

# CATALOG COURSE LISTING WITH PREREQUISITES

word division, capitalization, and number expression. The course also covers reviewing and applying the rules of written language to business documents, such as letters, memos, reports, resumes, agendas, and itineraries.

## **ADM 131\* Microcomputer Applications I** 3

This course is designed to examine and apply the skills, tools, and information necessary to perform basic software applications used with microcomputers. The course will cover Microsoft Word, Outlook, Power Point, and Desktop Publisher.

## **ADM 135\* Business Math with 10-Key** 3

This course will cover fundamental business mathematical operations and will emphasize development of speed and accuracy. The course will also include topics necessary for understanding business and consumer application and accounting techniques. Students will become familiar with using both mechanical and computerized 10-key calculators to complete basic math operations.

## **ADM 140A\* Professional Profile I** 1

This course will focus on the knowledge, professionalism, and skills necessary to succeed in business environments and grow personally and professionally. A variety of topics will be presented through campus seminars, faculty and guest speakers, student presentations, and group projects.

## **ADM 140B\* Professional Profile II** 1

This course continues ADM 140A and will focus on the knowledge, professionalism, and skills necessary to succeed in business environments and grow personally and professionally. A variety of topics will be presented through campus seminars, faculty and guest speakers, student presentations, and group projects. *PreReq: ADM 140A*

## **ADM 141\* Applied Media Technology** 3

This course offers an overview of the role that media play in modern society, with emphasis on the ethics, technology, social obligations, and technical skills needed by modern communicators. Course work will include digital photography, electronic publishing, and current office technology. As new technology emerges, it will be incorporated into this course.

## **ADM 151\* Document Processing II** 3

This course is a continuation of ADM 101. Students are placed in a variety of office settings with each situation emphasizing office skills such as editing, decision making, abstracting information, setting priorities, maintaining a smooth work flow, following directions, and working under pressure with interruptions.

## **ADM 161\* Administrative Procedures II** 3

This course builds on material covered in Administrative Procedures I and provides additional information on mail and shipping services, career development, effective leadership skills, stress and time management, telephone and teleconference techniques, and travel arrangements. *PreReq: ADM 115*

## **ADM 171\* Microcomputer Applications II** 3

This course provides advanced instruction on how to use database and spreadsheet software programs. The course is designed to give students in-depth knowledge for using Microsoft Excel and Access. Students will create and manage databases and spreadsheets along with exploring the Internet as a valuable tool in today's business. *PreReq: ADM 131*

## **ADM 180\* Accounting I** 3

This course is designed to give students a broad overview of business operations and the basic skills needed to keep financial records. Simulations provide students the opportunity to combine individual tasks in hands-on activities.

## **ADM 280\* Occupational Work Experience and/or Special Topics** 3

Occupational Work Experiences are available to students who have completed at least 85% of their required course hours. This is an optional course for students wanting practical experience at local businesses or other approved sites.

## **ANT 100 Introduction to Archaeology** 3

This course will provide a general survey of archaeology and the history of archaeology. The course will emphasize the impact and importance of major discoveries and the relevance of archaeology as it relates to history. The course will include a general survey of world prehistory revealing major cultural changes from the development of early foraging societies through the rise of agricultural and complex communities. The course will also examine prehistoric cultures and their evolution in adaptive responses to changing natural and social environments from the early Paleolithic to the emergence of urban civilizations.

## **ANT 112 General Anthropology** 3

This survey course will cover the biological and cultural evolution of humans and will emphasize culture as an adaptive and learned behavior necessary for survival. The four fields of anthropology will be introduced as well as perspectives on anthropological culture, cultural diversity, and the value of multiculturalism. The course will also focus on race, emergence of civilizations, survival needs and skills, agriculture, horticulture, contraception, economic development, language, marriage and family, kinship and descent, sex and gender, political organization, civilization, social control, social stratification, supernatural beliefs, art, globalization, and cultural change.

## **AUT 101\* Electrical and Electronic Systems** 3

This course is designed for the study of automotive electrical and electronic systems. The course takes a practical look at electricity and electronics. Topics include completing work orders, describing basic electrical relationships, identifying electrical system faults, and describing basic circuit characteristics. These topics will be covered using a variety of classroom and shop learning and assessment activities.

**AUT 121\* Auto Electricity and Electronics** 2  
This course deals with the operation, diagnosis, and service of electrical and computer systems found on modern automobiles and light trucks. The course will focus on the latest developments in the field.

**AUT 122\* Brakes I** 3  
This course is designed to provide students with an understanding of how various basic and antilock brake systems work.

**AUT 132\* Engine Performance I** 3  
This course provides current information to develop the skills needed to diagnose and fix drivability problems. The course will cover OBD I and OBD II diagnosis as well as computerized power-train systems.

**AUT 142\* Automotive Technology Lab I** 7  
This lab course is designed to give students practical work experience in diagnosing, repairing, and understanding the components of engine repair, auto transmission/transaxles, and auto service management.

**AUT 151\* Heating and Air Conditioning** 2  
This course is designed to provide knowledge of basic heating and air conditioning systems. The course will cover theory and operation as well as proper maintenance and service procedures. Emphasis will also be on safety and correct use of air conditioning tools. *PreReq: AUT 142*

**AUT 161\* Steering and Suspension I** 2  
This course is designed to provide knowledge about various parts of chassis work, such as wheel alignment, wheel balancing, and suspension system operation and repair.

**AUT 192\* Automotive Technology Lab II** 7  
This lab course is designed to give students practical work experience in diagnosing, repairing, and understanding the components of engine repair, auto transmission/transaxles, and auto service management. *PreReq: AUT 142*

**AUT 193\* Hybrid and Fuel Cell Vehicles** 1  
This course is designed to give students an introduction to the various types of hybrid electric vehicles (HEV). Topic areas include improvement of fuel economy, hybrid designs, HEV components, and the operation of the typical HEV.

**AUT 201\* Manual Drive Train and Axles** 2  
This course is designed to provide an in-depth study of torque delivery. The course will cover clutches, drive-lines, drive axles, transfer case, and manual transmissions and transaxles. *PreReq: AUT 192*

**AUT 211\* Auto Transmission/Transaxles I** 2  
This course provides an in-depth study of torque delivery and planetary gear sets. Instruction areas include operation, service, diagnosis, and repair of automatic transmission and transaxle functions, including electronic controls. *PreReq: AUT 192*

**AUT 221 Engine Performance Drivability II** 2  
This course provides current information to develop more advanced skills needed to diagnose and fix more complex drivability problems. The course will cover analyzing, servicing, and diagnosing a variety of fuel, exhaust, and induction systems. *PreReq: AUT 192*

**AUT 242\* Automotive Technology Lab III** 7  
This lab course is designed to give students practical work experience in diagnosing, repairing, and understanding the components of engine repair, auto transmission/transaxles, and auto service management.

**AUT 251\* Engine Repair I** 2  
This course begins with basic engine diagnostics and progresses through engine removal, tear down, short block repair, and cylinder head repair. The course will also emphasize correct engine repair techniques. *PreReq: AUT 242*

**AUT 255\* Automatic Transmission & Transaxle II** 1  
This course continues the study of automatic transmissions and transaxles and their electronic control circuits, including trouble diagnosis and service procedures. *PreReq: AUT 242*

**AUT 261\* Auto Service Management** 2  
This interactive course covers the essentials and rationale for service management. The course covers shop safety, safety planning, personal planning, supervising, and customer and staff relations. *PreReq: AUT 242*

**AUT 281\* Automotive Technology Lab IV** 7  
This lab course is designed to give students practical work experience in diagnosing, repairing, and understanding the components of engine repair, auto transmission/transaxles, and auto service management. *PreReq: AUT 242*

**AUT 291\* Service Management Practicum** 2  
This course is a continuation of AUT261 Auto Service Management and is designed to develop professional and personal skills. Emphasis will be placed on attendance, professional attitude, and laboratory behavior for the fourth semester of the program. *PreReq: AUT 242*

**AUT 295\* Occupational Work Experience** 0  
Occupational Work Experiences are available to students who have completed at least 85% of their required course hours. This is an optional course for students wanting practical experience at local businesses or other approved sites.

**BS 101 College Biology** 5  
This general education course will examine the plant and animal kingdoms, their fundamental principles and processes of life, and their relationship to everyday life. The course consists of three hours of lecture plus three hours of laboratory work per week. *PreReq: MAT 090, ENG 096, or Assessment*

## CATALOG COURSE LISTING WITH PREREQUISITES

**BS 104 Human Anatomy** 4  
This course is an anatomical study of the systems forming the human body. Emphasis is placed on the organs forming each system, the embryonic development of the system, and the functions of the tissues and organs of each system. The course includes a brief physiological review with each system and will consist of three hours lecture and one and one half hours of laboratory work per week.

**BS 105 Human Physiology** 4  
This course provides a physio-chemical study of the systems forming the human body. The course will focus on the relationships between the systems and the maintenance of a homeostatic condition within the body. Diseases, defects, and abnormalities are covered with each system. The course will consist of three hours of lecture and one and one-half hours of laboratory per week.

**BS 107 Introduction to Environmental Science** 4  
This interdisciplinary science course is designed to stimulate interest in environmental science, increase awareness of environmental problems, and improve understanding of environmental issues. The focus is on contemporary issues relating to biodiversity and sustainability. Topics include air and water quality, global climate change, environmental toxicants, energy resources, deforestation, overfishing, and endangered species. The course will also examine political and ethical concerns, sociological consequences, and economic impacts. A weekly lab session will offer a variety of experiences that demonstrate the principles, processes, techniques, and technologies of natural environmental systems and solutions.

**BS 109 Medical Terminology** 3  
This course is designed to teach basic competency in the vocabulary and comprehension of medical terms. The course will focus on word attack skills for medical terms. The course can serve as preparation for academic success in Human Anatomy.

**BS 110 Nutrition** 3  
This course is a study of the fundamentals of human nutrition and the relationship of nutrition to health, well-being, and personal food choices. The course will examine human growth and development, scientific research in nutrition, and how nutrition affects human disease. The course will also include the application of basic nutritional science to the requirements of life cycle stages, activity and exercise, and various states of health. This course is appropriate for Biology, Nursing, and Pre-Med students.

**BS 111 Nutrition for Health, Fitness, Sports** 3  
This course will provide a study of food and the effect nutrition has on health, growth and development, and physical performance. The course topics include: calorie expenditures and the nutritional value of foods, including related calculations; human metabolism and metabolic pathways for carbohydrates, fat, and protein; methods for determining body composition, general fitness levels, and exercise intensity; nutritional health research data and statistics; and scientific data concerning the effects of nutrition on health, fitness, and sports activity.

*\*indicates a technical course*

**BS 112 Nutrition for Health, Fitness, Sport w/ Lab** 5  
This course will provide a study of food and the effect nutrition has on health, growth and development, and physical performance. The course topics include: calorie expenditures and the nutritional value of foods, including related calculations; human metabolism and metabolic pathways for carbohydrates, fat, and protein; methods for determining body composition, general fitness levels, and exercise intensity; nutritional health research data and statistics; and scientific data concerning the effects of nutrition on health, fitness, and sports activity.

**BS 201 General Zoology** 5  
This course covers the anatomy and physiology of representative species of each phylum of the animal kingdom. The evolutionary connection between the phyla of the phylogenetic tree is covered with each phylum. *PreReq: BS 101*

**BS 202 General Botany** 5  
This course provides a study of the structure of plants and how they live, grow, and reproduce. The course will emphasize function as a basis of life and how it is related to human problems such as population, food supply, and conservation. *PreReq: BS 101 or BS 105*

**BS 203 Microbiology** 5  
This course will provide a study of the morphology, physiology, and classification of microorganisms associated with disease. The course will also focus on methods of disease prevention through sanitation, disinfection and sterilization, sources and means of infection, and body defenses. *PreReq: BS 101 or BS 105*

**BS 220 Pathophysiology** 4  
An introduction to the basic concepts of pathophysiology as it relates to nursing and pre-professional students. This course is organized in a manner that brings the principles of pathophysiology to the forefront with a focus on the relatively few patterns of disease, rather than asking students to memorize extensive catalogs of specific diseases and this conceptual approach is more suited to these types of students. Laboratories will be used to support and supplement the information presented in lecture. *PreReq: BS 104, BS 105*

**BS 240 Emergency Medical Technician** 12  
This course is designed to provide training for giving medical care to patients in the pre-hospital setting. The course will offer instruction and practical experience for students to develop the knowledge, skills, and attitudes needed for certification and practice as an Emergency Medical Technician-Basic (EMT-B) in Kansas.

**BS 241 CPR Basic** 1  
This course is designed to give students the knowledge and skills needed to provide emergency care using cardiopulmonary resuscitation (CPR) and automated external defibrillator (AED).

**BS 244 Emergency Medical Training - Intermediate** 6  
This course is designed to provide advanced training for giving medical care to patients in the pre-hospital setting. The course will offer instruction and practical experience for students to develop the knowledge, skills, and attitudes needed for certification and practice as an Emergency Medical Technician-Intermediate (EMT-I) in Kansas.



**BTT 105\* General Safety for the Building Trades** 1  
This course provides an introduction to the tools and materials required in the building trades. The course will cover wood and lumber, engineered panels, engineered lumber products, fasteners, hand tools, portable power tools, and stationary power tools. Emphasis will be placed on the safe operation of hand and power tools as well as job hazards and safety in the building trades industry.

**BTT 106\* Introductory Craft Skills** 4  
This course provides both a general and specific introduction to the construction business. The course will include a study of the Occupational Outlook and the various types of jobs available in the building trades industry. Emphasis will be placed on the safe operation of hand and power tools and other equipment. The course also covers the application of basic mathematics in the construction industry.

**BTT 109\* Carpentry Basics** 4  
This course provides step by step instruction on how to use equipment, tools, and fasteners, as well as how to measure, cut, drill, join, fasten, and finish various types of hardwoods and softwoods. The course will also cover reading and interpreting plans, elevations, schedules, sections, and details contained in basic construction drawings. Students will apply construction skills through participation in a student designed and built house project.

**BTT 111\* Roof Framing** 3  
This course provides a practical study of roof styles, including gambrel, gable, shed, hips, and trusses. The course covers rafter and truss design, lay-out, and framing, as well as cornice, soffits, and gable end construction.

**BTT 119\* Floors, Walls, and Ceiling Framing** 4  
This course provides experience in construction of the sub-floor system in a residential house according to the Uniform Building Code. The course also offers experience in constructing and installing exterior and interior walls, as well as a practical study of sheet rock materials and finishing techniques. *PreReq: BTT 111*

**BTT 121\* Residential Concrete Construction** 3  
This course is a study of the reinforcing materials, concrete, and basic formwork used in construction. The course will cover how to perform several masonry and concrete finishing tasks, such as mixing concrete, building footings, edges and wall forms, and using concrete reinforcing materials.

**BTT 155\* Residential Interior Finish Carpentry** 3  
This course focuses on the materials, techniques, and skills needed to finish the interior of a home. The course will cover insulation and moisture protection, finishing walls, ceilings, and floors, and cabinetry. *PreReq: BTT 121*

**BTT 159\* Windows, Doors, and Stairs** 3  
This course provides a study of exterior sheathings, windows, doors, sidings, eaves, and fasciae. The course will include instruction and experience in installation, finish, and maintenance. In addition, the course will provide experience in installing thresholds, weather striping, locksets, and overhead garage doors.

**BTT 170\* Painting, Finishing, and Decorating** 5  
This course focuses on the various materials used for coatings that cover all types of finishes, including wood and other materials such as metals and drywall. The course will provide instruction and experience in paints, stains, varnishes, and various synthetic materials, both clear and colored. *PreReq: BTT 159*

**BUS 101 Introduction to Business** 3  
This course provides an introduction to business, including business organization and management, the financing of a business operation, the marketing of the product or service, the accounting of business transactions, and career information.

**BUS 102 Personal Finance** 3  
This course is for non-business as well as business majors. The course is primarily concerned with the management of money from the viewpoint of the individual. Topics covered include the consumer's credit buying, borrowing, saving, and investments; purchase of insurance, real-estate, and other major items; the problem of taxation and wills; and controlling expenditures through the use of a budget.

**BUS 103 Accounting I** 3  
This course will focus on the recording, classification, and analysis of economic transactions of the sole proprietorship form of business ownership. The student will analyze transactions, use journals and ledgers, prepare financial statements, and summarize results at the close of the fiscal period.

**BUS102 Personal Finance** 3  
This course is for non-business as well as business majors. The course is primarily concerned with the management of money from the viewpoint of the individual. Topics covered include the consumer's credit buying, borrowing, saving, and investments; purchase of insurance, real-estate, and other major items; the problem of taxation and wills; and controlling expenditures through the use of a budget.

**BUS 105 Accounting II** 3  
This course is a continuation of Accounting I. The focus of the course will be on recording, classification, and analysis of economic transactions of the corporation. Students will analyze transactions, use journals and ledgers, prepare financial statements, and summarize results at the close of the fiscal period. Students will be introduced to decision-making and financial analysis. *PreReq: A C or higher in BUS103*

**BUS 108 Business Visitations** 1  
This course provides the opportunity to tour businesses. Owners or managers will host students and explain their business operations.

**BUS 109 Applied Office Practice I** 1  
This course provides paid on-the-job training in an office setting.

## CATALOG COURSE LISTING WITH PREREQUISITES

- BUS 110 Records Management** 3  
This course provides instruction on how to manage records in an office setting. The course will cover methods of filing, including alphabetic, numeric, geographic, subject, and chronological, as well as cross-referencing and procedures for using requisitions, retrievals, charge-outs, and follow-ups. The course will also examine special equipment and supplies, micro-graphics, cycle creation, retention, transfer, and records safety, security, and disposal.
- BUS 111 Applied Office Practice II** 1  
This course provides paid on-the-job training in an office setting. *PreReq: BUS 109*
- BUS 112 The Business of Personal Training** 3  
This course will provide a study of the entrepreneurial process specifically focused on the business of personal training. The course will cover topics such as opportunity recognition, entry strategies, market opportunities and marketing, business plan, financial projections, venture capital, financing, external assistance for startups and small businesses, legal and tax issues, intellectual property, franchising, and entrepreneurship economics.
- BUS 113 Business English and Vocabulary** 3  
This course will cover the essentials of business writing and will focus on terminology, word choice, spelling, capitalization, punctuation, and effective sentence structure.
- BUS 115 Business Math with Calculators** 3  
This course covers basic business math operations and focuses on the development of speed and accuracy on the calculator. The course will emphasize business and consumer applications using both mechanical and computerized 10-key calculators.
- BUS 116 Introduction to Accounting** 3  
This course provides an introduction to the fundamental principles of accounting as applied to business enterprises. The entire accounting cycle is covered.
- BUS 117 Computerized Accounting** 3  
This course provides an introduction to computerized accounting. The course will offer practical experience in establishing and maintaining accounting systems and records for single proprietorships and corporations. *PreReq: BUS 116 or permission*
- BUS 120 Professional Development I** 1  
This course provides an introduction to the concepts of professional activities and behavior in business. The course will focus on attitude, work ethic, leadership, and communication. *PreReq: Permission*
- BUS 120A Professional Development II** 1  
This course provides an introduction to the concepts of professional activities and behavior in business. The course will focus on attitude, work ethic, leadership, and communication. *PreReq: Permission*
- BUS 120B Professional Development II** 1  
This course provides an introduction to the concepts of professional activities and behavior in business. The course will focus on attitude, work ethic, leadership, and communication. *PreReq: Permission*
- BUS 120C Professional Development IV** 1  
This course provides an introduction to the concepts of professional activities and behavior in business. The course will focus on attitude, work ethic, leadership, and communication. *PreReq: Permission*
- BUS 123 Advanced Document Production** 3  
This course focuses on increasing straight copy speed and production rate for letters, business forms, tables, reports, and rough-draft copy that would be encountered in a business office setting.
- BUS 125 Human Resources** 3  
This course will examine the development and role of human resources management in an organization. The course will focus on legal and ethical contexts, administration of wages and benefits, job design and analysis, performance management systems, and recruitment, hiring, and training.
- BUS 126 Keyboarding** 1  
This course covers basic touch keyboarding skills for computer use.
- BUS 127 Principles of Entrepreneurship I** 3  
This courses emphasizes the major issues confronting entrepreneurs and those in small business. It provides guidance regarding the legal considerations of which entrepreneurs should be aware when launching a new enterprise. It serves as a source and reference to those who either aspire or are currently active in the entrepreneurial world.
- BUS 130 Microcomputer Applications I: Word Processing, Spreadsheet, Database, Presentation** 3  
This course is designed to provide practical knowledge and skill in using basic computer applications. The course will focus on problem solving with the use of word processing, spreadsheet, database management, and presentation software.
- BUS 132 Microcomputer Applications I: Outlook** 1  
This course is designed to develop the desktop information management program skills needed in business, which include sending and receiving e-mail and managing messages, appointments, contacts, and tasks. Calendars will be shared with other users, and data stored within Outlook will be integrated to and from the other applications within the Microsoft Office suite.
- BUS 133 Microcomputer Applications I: Spreadsheet** 3  
This course focuses on the mastery of spreadsheet concepts and applications utilizing the spreadsheet as a tool in the processing of information.

**BUS 136 Microcomputer Applications I: Desktop Publishing 3**

This course will focus on the production of publication-quality documents. Appropriate software will be used to combine text and graphics. The course will provide practice in creating, editing, formatting, laying out, and designing brochures, programs, flyers, advertisements, resumes, agendas, invitations, menus, letterheads, forms, booklets, and newsletters.

**BUS 136A Microcomputer Applications I: Desktop Publishing 2**

This course will focus on the production of publication-quality documents. Appropriate software will be used to combine text and graphics. The course will provide practice in creating, editing, formatting, laying out, and designing brochures, programs, flyers, advertisements, resumes, agendas, invitations, menus, letterheads, forms, booklets, and newsletters.

**BUS 137 Microcomputer Applications I: Integrated Software 3**

This course will focus on problem solving with the use of integrated software.

**BUS 139 Microcomputer Applications I: Word Processing 3**

This course is designed to provide students instruction on word processing concepts, systems, equipment, and career opportunities.

**BUS 140 Microcomputer Applications II: Word Processing, Spreadsheet, Database 3**

This course provides advanced instruction in the use of word processing, spreadsheet, and database software. *PreReq: BUS 130*

**BUS 151 Electronic Business Presentation 3**

This course will focus on using presentation software to create organizational charts, business graphs, and other visual information materials. The course will also cover how to enhance presentations by using features such as animation, slides, templates, note pages, and transition effects.

**BUS 181 Microcomputer Applications I: Word Processing 1**

This course is designed to provide instruction in using word processing software. This course is not available for students who have already taken BUS 139.

**BUS 182 Microcomputer Applications I: Database Management 1**

This is an introductory course that will cover the basic functions to set up a database, enter and add data, edit entries, delete entries, find data, index and sort data, save a database, and print files. The main focus is on the combination of practical database design principles with hands-on experience in the computer laboratory.

**BUS 183 Microcomputer Applications I: Spreadsheet 1**

This course is designed to provide instruction in using spreadsheet software. This course is not available for students who have already taken BUS 133.

**BUS 185 Microcomputer Applications I: Desktop Publishing 1**

This course is designed to provide instruction in using desktop publishing software. This course is not available for students who have already taken BUS 136.

**BUS 186 Microcomputer Applications I: Integrated Software 1**

This course will focus on problem solving with the use of integrated software. This course is not available for students who have already taken BUS 137.

**BUS 188 Microcomputer Applications I: Windows 1**

This course is designed to introduce Microsoft Windows operating environment software.

**BUS 189 Microcomputer Applications I: Electronic Business Presentation 1**

This course is designed to provide instruction in using business presentation software. This course is not available for students who have already taken BUS 151.

**BUS 191 Microcomputer Applications II: Word Processing 1**

This course provides advanced instruction in the use of word processing software. This course is not available for students who have already taken BUS139. *PreReq: A C or higher in BUS 130 or BUS 181*

**BUS 200 Financial Accounting 4**

This course focuses on the basic accounting model, measurement processes, and data classifications essential to the interpretation and effective use of financial statements by shareholders, creditors, government auditors, and managers. The course will also emphasize the effective communication of financial information. *PreReq: BUS 116 or permission*

**BUS 201 Principles of Management 3**

This course is designed to provide a basic understanding of the field and techniques of management. The course will cover management and managers, scientific management, human relations in management, bureaucracy in management, contingency findings, the management of foreign operation, product management, and ethics and social concerns of managers.

**BUS 203 Macroeconomics 3**

This course provides a study of basic macroeconomic concepts, principles, and terminology. Attention is given to supply and demand, national income, unemployment, money and banking, international trade, and finance. *PreReq: MAT 100 or Assessment*

**BUS 204 Microeconomics 3**

This course provides a study of basic microeconomic theory applied to the analysis of prices, markets, production, profits, rents, interest, and wages. *PreReq: MAT 100*

**BUS 205 Business Law 3**

This course provides a basic study of law related to business. Emphasis will be on contracts, law of sales, negotiable instruments, consumer protection, and the Uniform Commercial Code (UCC).

**BUS 209 Medical Procedures 3**

This course covers duties and responsibilities of office employees in the medical office. The course will focus on oral and written

## CATALOG COURSE LISTING WITH PREREQUISITES

communications, medical vocabulary, medical forms, travel arrangements, filing, mail handling, business meetings, financial records, reprographics, public relations, establishing priorities, and organization work. *PreReq: BS 109*

**BUS 210 Marketing 3**  
This course provides a study of the importance of marketing techniques to the success of modern organizations. The course will focus on the four basic elements of marketing: product, price, promotion, and place. Topics include the marketing concept, marketing research, consumer behavior, the product life cycle, channels of distribution, physical distribution, advertising, personal selling, pricing objectives and strategies, and social responsibilities of marketers.

**BUS 213 Business Communications 3**  
This course covers both traditional and innovative communication skills. The primary focus will be on writing employment documents and business letters for specific situations. *PreReq: ENG 101*

**BUS 216 Managerial Accounting 3**  
This course provides a study of materials, labor, overhead, budget administration, cost accounting systems, break-even analysis, accounting statement analysis, and return on investment as factors in management decisions. *PreReq: A C or higher in BUS 105 or BUS 200*

**BUS 230 Principles of Entrepreneurship II 3**  
This course will provide a study of the basic entrepreneurial process. The course will cover opportunity recognition, entry strategies, market opportunities and marketing, creation of a successful business plan, financial projections, venture capital, debt and other forms of financing, external assistance for startups and small businesses, legal and tax issues, intellectual property, franchising, and entrepreneurship economics. *PreReq: BUS127, BUS103, BUS210, and BUS101 or BUS201, BUS 130*

**BUS 245C Electronic Communication: Internet 1**  
This course introduces Internet use and applications, such as e-mail, file transfer protocol, and the web.

**BUS 245D Electronic Communications: Web Design 2**  
This course is designed to provide a basic understanding of the Internet and various software applications used with the Internet. The course will also cover basic web page design.

**BUS 246A Microcomputer Applications I: Dreamweaver 3**  
This course is designed to provide an introduction to web site creation and design through the use of Adobe Dreamweaver software. Also covered will be how to use the Spry framework to create enhanced web site activities. The course will include adding media objects to web pages as well.

**BUS 246B Microcomputer Applications I: FrontPage 3**  
This course focuses on the practical use of computer communication through web page design using Microsoft FrontPage software.

**CAD 101\* Technical Drawing I 4**  
This course teaches the basic concepts of drafting communication.

Subjects include line types, orthographic projections, sectioning, language, auxiliary views, pictorial drawings, and scale.

**CAD 111\* Operating Systems 4**  
This course provides the student with a basic understanding of computer terminology, operations, hardware, and software. An overview of word processing, spreadsheet, and database software related to the student's primary area will be explored.

**CAD 122\* Measurements 3**  
This course covers the basic principles of operations and scale, with emphasis on the order of operations. The course reviews the use of decimal and fractional operations and also covers the use of scales and how they are read and applied.

**CAD 131\* Computer Graphics I 5**  
This course is designed to provide students with a basic understanding of the uses and applications of computer drafting hardware and software. The course will also explore and develop drawing, editing, and coordinate input skills.

**CAD 151\* Technical Drawing II 4**  
This course is a continuation of Technical Drawing I and teaches the basic concepts of drafting communication. Subjects include line types, orthographic projections, sectioning, language, auxiliary views, pictorial drawings, and scale. *PreReq: CAD 101*

**CAD 162\* Word Processing 2**  
This course is designed to give the student a working knowledge and skill in the use of Microsoft Word software and how it can be applied to computer assisted drafting.

**CAD 172\* Algebra 2**  
This course covers the basic principles of algebra, including symbols, signs, equations, basic operations, proportions, and formulas. The course will focus on how these principles apply to graphic communications.

**CAD 182\* Computer Graphics II 5**  
This course is designed to provide students with an advanced understanding of the uses and applications of computer drafting hardware and software. The course will also explore and develop drawing, editing, and coordinate input skills. *PreReq: CAD 131*

**CAD 201\* Technical Drawing III 4**  
This course covers advanced concepts of drafting communication pertaining to mechanical engineering. Subjects include line types, orthographic projections, sectioning, language, auxiliary views, pictorial drawings, and scale. *PreReq: CAD 131*

**CAD 211\* Spreadsheets 3**  
This spreadsheet application course is designed to show students how to organize data, complete calculations, make decisions, graph data, and develop professional-looking worksheets. The course will also cover Microsoft Windows concepts and terminology.

**CAD 221\* Geometry** 2  
This course covers the principles of basic geometric construction: lines, arcs, circles, angles, and the relationships between geometric forms. The course will focus how these principles apply to graphic construction.

**CAD 232\* Computer Graphics III** 5  
This advanced course will cover hardware, networking, and Internet concepts. The course will cover how to install hardware devices, interrupts, jumpers, and switches, as well as troubleshooting. Network protocol, operations, and concepts will also be covered. The course will also focus on accessing information on the Internet and using e-mail and news groups. *PreReq: CAD 182*

**CAD 251\* Technical Drawing IV** 4  
This course covers advanced concepts of drafting communication pertaining to mechanical engineering. Subjects include line types, orthographic projections, sectioning, language, auxiliary views, pictorial drawings, and scale. *PreReq: CAD 201*

**CAD 261\* Database** 4  
This database application course is designed to show students how to create, store, sort, and retrieve data. The course will also cover Microsoft Windows concepts and terminology.

**CAD 271\* Trigonometry** 2  
This course covers trigonometric functions, solution of triangles, vectors, and complex numbers. Application of trigonometric functions in the solution of triangles will be stressed.

**CAD 282\* Computer Graphics IV** 5  
This advanced course will cover hardware, networking, and Internet concepts. The course will cover how to install hardware devices, interrupts, jumpers, and switches, as well as troubleshooting. Network protocol, operations, and concepts will also be covered. The course will also focus on accessing information on the Internet and using e-mail and news groups. *PreReq: CAD 232*

**CAD 295\* Occupational Work Experience** 0  
Occupational Work Experiences are available to students who have completed at least 85% of their required course hours. This is an optional course for students wanting practical experience at local businesses or other approved sites.

**CJ 100 Introduction To Criminal Justice** 3  
This is an introductory course in the field of criminal justice. The course will provide a short historical background of law enforcement, constitutional limits of law enforcement, 4th, 5th, 6th and 14th amendment safeguards, court room processes, and court processes from pre-arrest through verdict. This course will give students a general knowledge about the scope of crime, measurement of crime, and causes of crime.

**CJ 105 Introduction to Corrections** 3  
This course is an introductory study of the entire field of corrections, beginning with conviction. The course will cover the sentencing grid from the state of Kansas, including mitigating and

aggravating factors, post-conviction remedies, and appeal processes. Students will explore alternatives to confinement as well as probation and parole practices. There will be an emphasis on current trends in incarceration.

**CJ 110 Fundamentals of Investigation** 3  
This course is designed to explore the fundamentals of criminal investigative techniques. While many investigative techniques remain relatively static, most are evolving due to technology, national databases, and applicability of basic medical practices. This course focuses specifically on major felony investigations with an emphasis on adherence to rigid crime scene protocols. *PreReq: CJ 100*

**CJ 111 Forensic Investigation** 2  
This course focuses on laboratory investigations of forensic science, with an emphasis on the lab operations of criminal science. Topics will include detection of blood stains, blood typing and testing, hair analysis, drug detection, gunshot residue analysis, fingerprint analysis, virus spread within a population, and DNA fingerprinting. The course will use laboratory and computer simulations.

**CJ 120 Juvenile Delinquency** 3  
This course is a contemporary approach to understanding the nature of juvenile delinquency. Students will examine the evolution of juvenile rights in America and juvenile court processes. The course will provide a balanced view of high risk factors for delinquency and prevention methods.

**CJ 140 Police Patrol Procedures** 3  
This course is designed for students who want to have a career in law enforcement. Students will gain a fundamental understanding of the organization, management, and administration of law enforcement agencies. Basic police patrol procedures, including officer safety protocol, pursuit policies, arrest procedures, search and seizure processes, and a basic understanding of police report writings will be covered.

**CJ 201 Criminal Law I** 3  
This course is designed to provide the student with a general understanding of American criminal law. Topics include principles of criminal law, principles of criminal liability, complicity, inchoate offenses, defenses, justifications, crimes against persons, crimes against property, and crimes against public order. Additionally, this course will cover basic rules of criminal procedure, including, but not limited to, constitutional aspects of criminal justice processes, pretrial processes, trials, sentencing, and appeals. *PreReq: CJ100 or permission*

**CJ 205 Critical Issues In Law Enforcement** 3  
This course is designed to focus on several issues facing law enforcement today in terms of police response, mandatory arrest, and policy formation. These issues recognize the core of violence including domestic violence, child abuse/neglect, and elderly abuse. An overview of each system is provided as well as careful examination of the infrastructure and interrelationship between them. *PreReq: CJ100 or permission*

## CATALOG COURSE LISTING WITH PREREQUISITES

**CJ 211 Penology and Corrections** 3  
This course provides a survey of correctional services and treatment. The course includes philosophy, history, correctional models by type and function, institutional treatment, parole operations, community-based treatment, and special treatment programs.

**CJ 220 Practicum in Administration of Justice** 3  
Students will participate in community administration of justice agencies to provide experience in the practical application of classroom instruction.

**COL 103 College Success and Orientation** 1  
This course is an orientation to the world of college. The course will include preparation of an academic plan to obtain an associate degree in a selected major. The course will also cover curriculum structure, program design, college success skills, transferring to a four-year institution, decision making, and career planning. This course must be taken before registering for the 25th credit hour at HCC. Students who have already taken a similar course elsewhere or who are transferring more than 30 hours to HCC are not required to take this course.

**COL 103A College Success and Orientation** 1  
This course is an orientation to the world of college. The course will include preparation of an academic plan to obtain an associate degree in a selected major. The course will also cover curriculum structure, program design, college success skills, transferring to a four-year institution, decision making, and career planning.

**COL 162 Careers in Sports and Fitness** 2  
The purpose of this course is to make students aware of the variety of careers related to sports and fitness. The course will provide students a realistic look at personal abilities, level of commitment, and work ethic. The course will examine various sports and fitness careers as well as preparation, expectations, and employment opportunities. Guest speakers currently engaged in sports or fitness careers will also provide information and insight. The focus of the course is to help students make an informed choice and develop a plan to achieve personal goals in a sports or fitness career.

**COL 170 Leadership Organization and Goals** 0.5  
This course will provide practical instruction and experience in student government and leadership. The course will cover leadership qualities, parliamentary procedures, time management, conflict resolution, budgeting, and team building. Students will be actively involved in student government, as well as fundraising, community projects, student activities, entertainment, and programs. This course is designed for individuals with little or no background in student government. *PreReq: Permission*

**COL 180 Self Awareness for Young Adults** 2  
This course will emphasize personal and career growth and development by exploring the family of origin, developing insight and self-confidence, and making assertive life choices. We will focus on the individual's ability to find answers from within him/her self, as well as the development of the class as a group.

**CRT 191\* Certification Training Lab** 3  
This class is designed to give the second semester student supervised practice with computerized testing. Students will apply previously learned skills and concepts in preparation for the CompTIA A+ Examinations. Practice test banks will be used to simulate the exams. Students will take practice tests, review answers, research any incorrect answers, and research and obtain correct answers. The actual exams are scheduled when the student feels prepared for them.

**CST 103\* Operating Systems** 2  
This course provides instruction on the most commonly used major operating systems. Components covered will be installation, configuration, maintenance, file management, and batch files.

**CST 105\* Industrial Computer Applications** 2  
This is an introductory course appropriate for all technical and skilled trade students. This course is designed to provide computer familiarity, not proficiency. Industrial applications of computers will be stressed. Computer software, storage/input/output devices, and controls as they apply to industry will be explored. The course is competency based and will provide the student with experiences and demonstrations in keyboarding, Windows programs, word processing, spreadsheets, computer graphics, and e-mail. The student will learn the basic features and functions of the Internet, Outlook, Word, and Excel. The student will also learn about basic computer concepts and Internet skills.

**CST 106\* Networking Fundamentals: CCNA1** 4  
This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. It uses the Open System Interconnection (OSI) and Transmission Control Protocol (TCP) layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. The principles and structure of Internet Protocol (IP) addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. Labs use a "model Internet" to allow students to analyze real data without affecting production networks. Packet Tracer (PT) activities help students analyze protocol and network operation and build small networks in a simulated environment. This is the first class in a series of four offerings to prepare for the Cisco Certified Network Associate (CCNA) certification. *PreReq: Concurrent enroll in CST or CompTIA+ Certification*

**CST 111\* PC Fundamentals** 3  
This course is designed as an introduction to personal computer technology. The course will examine basic computer concepts, history of computers, terminology associated with computer technology, and basic hardware troubleshooting.

**CST 122\* Technical Writing** 2  
This course is designed to give students instruction on the organization and writing of technical documents, including proposals, business letters and memos, and technical reports.

**CST 124\* PC Troubleshooting Essentials 3**  
This course is intended to introduce the student to various computer components, business systems, and the basics of troubleshooting the Personal Computer (PC). Safety and proper tool usage will also be covered. The course will focus on the techniques used to isolate and resolve computer problems, multimedia technology, and input-output devices, including monitors and video cards. Instruction will also be given on basic electrical principles and PC power supplies.

**CST 154\* CompTIA A+ Essentials 3**  
This course is designed to give instruction on complex hardware installation as well as prevention and recovery of data loss. The course will also provide an introduction to telephone communications, printers, notebook PCs, virus infection, and data recovery.

**CST 156\* Integrated Applications 2**  
This course is designed to give instruction on the skills, tools, and information necessary to perform basic software applications used with microcomputers. The course will cover software applications for word processing, spreadsheet, database, presentation, and Web page development.

**CST 158\* CompTIA A+ Practical Applications 3**  
This course is designed to give instruction on how to troubleshoot and resolve operating system issues. The student will use tools within the operating systems as well as third-party software to resolve problems. This course will examine common operating system problems and problems specific to individual operating systems. The differences, advantages, and disadvantages of several Windows operating systems will be considered.

**CST 159\* CCNA2 : Routers and Routing 4**  
This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students will analyze, configure, verify, and troubleshoot the primary routing protocols: Routing Information Protocol Version 1 (RIPv1), Routing Information Protocol Version 2 (RIPv2), Enhanced Interior Gateway Routing Protocol (EIGRP), and Open Shortest Path First (OSPF). The course will cover the recognition and correction of common routing issues and problems. The course includes a basic procedural lab, followed by basic configuration, implementation, and troubleshooting labs. Packet Tracer activities will reinforce concepts and allow students to model and analyze routing processes that may be difficult to visualize or understand. This is the second class in a series of four offerings to prepare for the Cisco Certified Network Associate (CCNA) certification. *PreReq: CST 106*

**CST 201\* Advanced Operating Systems 3**  
This course is designed to provide advanced instruction on the most commonly used operating systems. The course will cover installation and configuration of dual boot operating systems, system file configuration and editing, system files, and system conflict resolution.

**CST 205\* Advanced Integrated Applications 3**  
This course is designed to provide advanced instruction on how to use Microsoft Office for Windows 2007. The course covers Microsoft Word, Excel, Access, and PowerPoint, and will include desktop publishing, databases, spreadsheets, and integrated presentations. Simulated business problems will be used and students will create and maintain records, inquire, sort, search, and prepare reports.

**CST 206\* Programming 2**  
This course is designed to provide an introduction to computer programming. The course will cover basic programming skills such as form and menu creation, decision making, looping arrays and subroutines, and database interfacing. The course will introduce students to programming in a Windows environment using Visual Basic.

**CST 207\* Technical Support Lab I 2**  
This course is designed for second-year students who are enrolled in the Computer Support Technology and/or the A.A.S. Degree Program. The course will provide advanced classroom instruction as well as practical experience with service calls and help desk situations. Students will be repairing PCs and resolving networking problems during class time, working directly with instructors and students from other departments on campus. The course will also cover advanced techniques to develop and improve workplace skills.

**CST 208\* Network Operating Systems 2**  
This course provides an introduction to computer networking administration and maintenance. The course will examine typical network hardware, network architectures, data transmission, and popular network technologies as well as how communication layers and their protocols are used on a network. The course will also cover installing Novell NetWare, troubleshooting network problems, and ensuring the integrity and stability of a network.

**CST 212\* CCNA3: LAN Switching and Wireless 4**  
This course provides a comprehensive, theoretical, and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students learn about the hierarchical network design model and how to select services for each layer. The course explains how to configure a switch for basic functionality and how to implement Virtual Local Area Networks (VLANs), VLAN Trunking Protocol (VTP), and Inter-VLAN routing in a converged network. The different implementations of Spanning Tree Protocol in a converged network are presented as well as how to implement a Wireless Local Area Network (WLAN) in a small-to-medium network. This is the third class in a series of four offerings to prepare for the Cisco Certified Network Associate (CCNA) certification. *PreReq: CST 106, CST 159*

**CST 213\* Network Operating Systems Lab 3**  
This course is an introduction to computer networking administration and maintenance. The course will examine typical network hardware, network architectures, data transmission, and popular network technologies as well as how communication layers and their protocols are used on a network. The course will also cover installing Windows Server and Linux Server, troubleshooting of network problems, and ensuring integrity and stability of a network.

## CATALOG COURSE LISTING WITH PREREQUISITES

**CST 214\* CCNA4: WAN Technologies** 4  
This course is designed to provide a comprehensive understanding of how to design and implement Local Area Networks (LANs) and Wide Area Networks (WANs). The focus will be on the equipment and technologies used in LANs and WANs. This course covers the features and functions of these devices as well as the circumstances under which each device can be implemented. Cabling standards and appropriate design parameters for various types of media and topologies are included. This course introduces wireless technologies and a variety of high-speed Internet access options. The challenges involved in creating a network design that meets the needs of the users of today's LANs and WANs will be discussed. The course will feature hands-on projects and case projects that provide experience in using tools involved in network design and implementation. This is the fourth class in a series of four offerings to prepare for the Cisco Certified Network Associate (CCNA) certification. *PreReq: CST106, CST159, CST212*

**CST 295\* Occupational Work Experience** 0  
This course is designed to finish students' preparation for employment in the Information Technology industry. Students will complete a resume to present to potential employers and may also participate in on-the-job-training opportunities.

**DSL 101\* Shop Safety I** 1  
This course is designed to identify safety hazards associated with working around heavy equipment and to establish procedures that will prevent accidents.

**DSL 111\* Fundamentals of Operating Principles** 4  
This course covers the history of the diesel engine from invention to the present. The course will also focus on the differences and advantages of the diesel over other types of engines.

**DSL 121\* Engine Maintenance** 2  
This course provides instruction for standard DB, DB@ and DM pump disassemble inspection and overhaul. The course covers removal, installation, and timing procedures on the injection pumps, as well as test stand operation, pump installation on the test stand, and proper calibration of the injection pump.

**DSL 132\* Engine Overhaul** 5  
This course teaches the three major engine companies products. Training engines are provided for all classes to ensure the student's knowledge of troubleshooting maintenance, disassembly, overhaul, and reassembly techniques. Training is further enhanced by class discussion and visual media.

**DSL 141\* Welding & Fabrication Lab** 2  
This course includes basic principles and fundamentals of arc welding and acetylene cutting as applied to heavy equipment and diesel repairs. It also covers basic welding and acetylene safety.

**DSL 152\* Fuel Systems Diagnosis/Repair** 4  
This course teaches the operating of fuel systems used on most modern diesel engines, how they differ from one another, and service and adjustment of each system.

**DSL 161\* Introduction Electrical Diagnosis/Repair** 4  
This course of basic electrical systems on the diesel engine teaches troubleshooting and component testing using volt ohm meter and volt 33 tester.

**DSL 171\* Introduction to Clutch/Power Train** 3  
This course teaches disassembly, inspection, and troubleshooting of the three major types of clutch systems used by present engine manufacturers. The course also teaches installation techniques and adjustments.

**DSL 182\* Introduction to Hydraulics** 3  
This course gives a student a short introduction to hydraulic systems. It covers major component identifications, their functions and how each component operates in the system.

**DSL 201\* Shop Safety II** 1  
This course is continuation of Shop Safety I and is designed to identify safety hazards associated with working around heavy equipment and to establish procedures that will prevent accidents. Avoidance to actions that may result in damage to personal or equipment is stressed. *PreReq: DSL 101*

**DSL 212\* Advanced Engine Overhaul** 3  
This is an advanced training course in engine overhaul. Advanced training is provided to ensure the student's knowledge of troubleshooting maintenance, disassembly, overhaul, and reassembly techniques. *PreReq: DSL 132*

**DSL 222\* Advanced Electrical Diagnosis/Repair** 5  
Students will become proficient in the diagnosis and repair of electrical circuits including testing, repairing, and /or replacing of components. *PreReq: DSL 161*

**DSL 232\* Hydraulic Components Diagnosis/Repair** 3  
This course teaches the theory of both open and closed center hydraulic systems. It covers pump overhaul and testing procedures. It also covers the use of hydraulic flow meter and testing procedures.

**DSL 251\* Electronic Computer Diagnosis Repair** 3  
This course covers the study of the electrical and electronic control system used on diesel powered equipment. This course also teaches the student how to use service tools, system operations, monitoring attachments, fault codes, and injection timing sensor and actuator principles to diagnose computer related problems.

**DSL 261\* Air Conditioning Diagnosis/ Repair** 3  
This course covers refrigeration theory, operation, testing, and repair of air conditioning systems. Students will also discuss the use of refrigerant recovery methods.



**DSL 271\* Brakes/Suspension Diagnosis/Repair** 3  
This course teaches troubleshooting disassembly, inspection and adjustment of both hydraulic and air brake systems with the advantages and disadvantages of both systems. The course also covers the two air systems, their components, and function in the brake system.

**DSL 275\* Diesel Management** 3  
This course introduces the concepts and principles of effective business management as they apply to diesel technology and includes forms of business ownership, typical business organizational structures, relationship of business to the community and the effect of government regulations on businesses.

**DSL 281\* Transmission Overhaul/ Diagnosis** 3  
This course covers standard DB, DB2 and DM pump disassemble inspection and overhaul. It teaches removal, installation, and timing procedures on the above injection pumps. This course also teaches test stand operation, pump installation on the test stand, and proper calibration of the injection pump.

**DSL 291\* Advanced Clutch/Power Train** 3  
Students will become proficient in the diagnosis and repair of power trains, clutches, transmissions, and differentials. *PreReq: DSL 171*

**DSL 295\* Occupational Work Experience** 0  
Occupational Work Experiences are available to student who have completed 85% of their required course hours. This is an optional course for diesel technology students who wish to gain further “real life” experiences at local businesses and/or approved sites.

**ECH 100 Early Childhood Fundamentals** 3  
Students will develop baseline knowledge and skills needed to work with young children in an Early Care and Education Program in Northeast Kansas. Students will complete a Kansas Bureau of Investigation (KBI) background check and provide a copy of a current physical and TB test. Information covered will serve as the foundation for decisions and practices carried out by professionals in all settings and programs. Students set up their Child Development Associate (CDA) Professional Portfolio. In addition, students will identify the steps involved in preparing for National Child Development Association (CDA) credentialing. *PreReq: Students unable to pass the KBI inspection, the physical, and the TB test are unable to work with young children.*

**ECH 101 Recognizing Child Abuse and Neglect** 1  
This course focuses on the categories of child abuse and neglect as well as the signs and symptoms of the various types of abuse and neglect. The course will cover appropriate responses to suspected abuse or neglect and what to do in the event of child disclosure. Kansas-mandated reporter laws are also discussed. This course is instructor-led and interactive through discussions and assignments in course discussion boards.

**ECH 102 Understanding Multiple Intelligences and Children’s Learning Styles** 1  
This course will focus on Howard Gardner’s theory of multiple intelligences and how different learning styles are affected by the environment, physiology, processing, emotions, and social choices. Practical information will be given on how to create educational environments by applying activities that use different learning styles. Students will also examine their own personal teaching style as applied to teaching multiple intelligences to a variety of students. This course is instructor-led and interactive through discussions and assignments in course discussion boards.

**ECH 103 Infant Toddler Creative Curriculum** 3  
This course will provide basic information about what professionals need to know and be able to do to provide quality care for infants and toddlers. The course will use the research-based Creative Curriculum model and will explore the integrated roles of the caregiver/teacher, the children, the families, and the community, using a strength-based model that defines developmentally appropriate practices for infants and toddlers and the role of the curriculum.

**ECH 104 Preschool Creative Curriculum** 3  
This course will provide basic information about what professionals need to know and be able to do to provide quality care for pre-school children. The course will use the research-based Creative Curriculum model and will explore the integrated roles of the caregiver/teacher, the children, the families, and the community, using a strength-based model that defines developmentally appropriate practices for preschoolers and the role of the curriculum.

**ECH 105 Early Childhood Cultural Competency** 1  
This course will present general concepts about cultural competency when working with children and families. The course will examine cultural norms, values, codes of conduct, traditions, and child rearing practices of ethnic, cultural, and other groups served by programs. The course will also focus on assessment of individual or family behavior and how racism, sexism, ageism, homophobia, and other forms of discrimination can affect individual and family development and functioning. This course is instructor-led and interactive through discussions and assignments.

**ECH 106 Understanding Children’s Temperament** 1  
This course provides an overview of the nine temperament traits and the variety of influences on temperament styles. The course will discuss challenging temperaments, including flexible, fearful, and feisty styles. Students will assess a child’s temperament as well as their own. This course is instructor-led and interactive through discussions and assignments in course discussion boards.

**ECH 107 Supporting Children’s Learning Through Play** 1  
This course will examine the nature and characteristics of play and why play is important in a child’s development. The course will cover the development domains and milestones that affect children’s learning through play, as well as the social and cognitive stages of play and the behavior children exhibit in those stages. The course is instructor-led and interactive through discussions and assignments in course discussion boards.

## CATALOG COURSE LISTING WITH PREREQUISITES

**ECH 108 Childhood Obesity and Good Nutrition 1**  
This course will examine the common reasons for childhood obesity and the complications of being overweight or obese. The course will focus on the new food pyramid, MyPlate, and will look at ways to encourage healthy eating habits and ways to integrate learning activities about healthy eating into daily routines. The course will also cover movement activities that encourage and support development and learning in children, as well as ways to share information on healthy eating and active living with parents and families. This course is instructor-led and interactive through discussions and assignments in course discussion boards.

**ECH 109 Bullying Prevention and Response 1**  
This course will examine types of bullying and consequences for bullying behaviors. The course will cover the dynamics of bullying behaviors and the roles of targets, bullies, and witnesses. Emphasis will be placed on intervention strategies for dealing with bullying behaviors, as well as strategies to prevent bullying behaviors. This course is instructor-led and interactive through discussions and assignments in course discussion boards.

**ECH 110 Early Childhood Functions I 3**  
This course is designed to provide the skills and knowledge for creating safe, healthy learning environments for infants, toddlers, and preschool age children. Individuals will also acquire the skills and knowledge associated with advancing physical and intellectual competence for those age groups. Creativity and communication are also explored. Students will learn how to ensure well-run programs. Students will achieve first aid/CPR certification. Student will conduct observation in an approved Early Care and Education Program in Northeast Kansas. Students will complete additional steps involved in preparing their Child Development Associate (CDA) professional Portfolio. *PreReq: ECH100*

**ECH 111 Caring for Children with Special Needs 1**  
This course will examine child development milestones and how to recognize signs of early childhood delays. The course will cover guiding terms, as well as laws and principles regarding special needs, including common questions and answers for childcare providers. The course will focus on observation, assessment, documentation, communication with families, and resources available to families and caregivers. This course is instructor-led and interactive through discussions and assignments in course discussion boards.

**ECH 115 Early Childhood Function II 3**  
Students will learn ways to establish positive relationships with parents and families with young children. Students will identify areas of strength and areas for future professional growth as an Early Childhood Professional. Students will complete the final steps necessary for requesting national Child Development Associate (CDA) Credentialing. Students will conduct classroom observations and complete the Direct Assessment Application. They will compile data from a family questionnaire and write their Professional Philosophy Statement. *PreReq: ECH100, ECH110*

**ECH 120 Family Child Care Administration 2**  
This course covers the management aspects of operating a family child care business. The course will focus on contracts, policies, legal issues, fee structure, collection, budgeting, cash flow, keeping records, taxes, and developing sound fiscal and management skills.

**ECH 150 Creative Experiences 3**  
This course is designed for early childhood classroom practitioners. The course will focus on how to develop interesting and secure environments and activities that encourage play, exploration, learning, and creative expression.

**ECH 160 Observing and Interacting with Young Children 3**  
This course is designed for practitioners who work with children and families. Students will develop skills for quality observation and documentation associated with young children. Ethical considerations and confidentiality are discussed. Students will conduct an in-depth child study. Students must identify a child and set up and conduct observations. Students will also conduct structured observations targeting specific developmental areas. Students will create a professional report illustrating the developmental level of the child. The child portfolio will include completed checklists, work samples, pictures, and interviews. *PreReq: ECH 100, ECH 110, ECH 115*

**ECH 180 Early Childhood Literacy and Language Development 3**  
This course will prepare current or future early childhood teachers to enhance the early literacy outcomes of young children by improving teachers' knowledge of early literacy development. Students will develop an in-depth understanding of language development and acquisition. Students will acquire skills and knowledge in facilitating early literacy to young children, and how to involve parents and families in the process. *PreReq: 9 CR of Early Childhood*

**ECH 182 Early Childhood CDA Renewal 3**  
This course is for students who have a current preschool or Infant/Toddler Child Development Associate (CDA) Credential and are interested in renewing their credential. Students will learn to act with specific goals in mind for all domains and children's development. This course provides specific ideas and strategies for interacting with children in key subject areas during both child-guided and adult-guided experiences. Students will complete all of the documentation and requirements for CDA renewal. *PreReq: A Valid Preschool or Infant/Toddler Child Development Association Credential @ CPR*

**ECH 200 Program Planning and Development 3**  
This course will examine the administrative and curriculum demands in different types of early childhood education centers. Funding, budgeting, evaluating, hiring, planning, collecting fees, and writing reports are some of the topics that will be covered. The course will emphasize developing sound fiscal and program management skills with a focus on interpersonal relationships. *PreReq: ECH 100, ECH 110, ECH 115*

**ECH 202 Early Childhood Mentoring** 3  
This course is for the committed Early Childhood Professional. Early Childhood Professional Ethics and Standards will be infused throughout the course. Students will reflect on their personal and professional growth and leadership skills. Understanding the role of the mentor, effective mentoring practices, and the mentor as a change agent will be explored. This course will provide individuals working in the Early Childhood field the basic foundation needed for developing mentoring relationships, especially those with apprentices. *PreReq: 12 hours of Early Childhood*

**ECH 210 Family Involvement in Education** 3  
This course will provide a study of family involvement in education from an interdisciplinary approach. The course will cover history, current research, and diversity in families and will also present information, activities, and programs to enrich family-school partnerships and collaborations. *PreReq: ECH 100, ECH 110, ECH 115*

**ECH 220 Principles of Inclusion** 3  
This course explores the barriers to and influences on inclusive education settings for young children. Topics covered will include instructional strategies, individualized instruction, and family perceptions of inclusion, collaborative relationships among adults, classroom ecology, social policy, and cultural and linguistic diversity. *PreReq: ECH 100, ECH 160, or permission*

**ECH 250 Early Childhood Practicum** 3  
This course is designed for students who are assuming teaching responsibility under guided supervision. Students must meet all state and national requirements for working in an Early Childhood facility. The purpose of the practicum is to put theory into practice. Students will spend 15 hours in classroom activities and 225 hours teaching in the Early Childhood classroom. The course will cover working with parents, classroom management, observation and assessment, values identification, trends and issues in Early Childhood, personal reflections, and educational philosophy. *PreReq: Permission*

**ED 101 Pre-professional Lab I** 1  
This course is designed to provide an introductory hands-on experience for students majoring in education. The course will consist of direct experience observing a professional educator in the classroom as well as tutoring and participation in classroom activities. *PreReq: ED 110*

**ED 102 Pre-professional Lab II** 1  
This course is a continuation of ED 101 and is designed to provide additional hands-on experience for students majoring in education. The course will consist of direct experience observing a professional educator in the classroom as well as tutoring and participation in classroom activities. *PreReq: Permission*

**ED 110 Introduction to Education** 3  
This course will cover the historical and sociological development of American education, the role of public schools in American society, and the diverse nature of the American student population. The

course will also look at professional opportunities in the field of education.

**ELE 101\* Electrical and General Safety** 1  
This course will present basic safety information for establishing a safe electrical working environment. The course will cover electrical and general safety practices needed during coursework and at construction sites. The course will provide hands-on instruction in the use and care of power tools, hand tools, special electrical trade tools, ladders, and other equipment.

**ELE 110\* Direct Current Fundamentals** 1  
This course will focus on basic direct current theory. The course will cover electron theory and Ohm's law and how they apply to direct current circuits. The course will also introduce series circuits and their equations, parallel circuits and their equations, and combination circuits and their equations.

**ELE 111\* Alternating Current Fundamentals** 2  
This course will examine the effects an alternating current has on circuits. The course will also cover the functions and properties of capacitors, inductors, resistors, and other circuit components.

**ELE 121\* Residential Construction Wiring and Maintenance** 6  
This course is an introduction to the field of residential wiring. The course will cover basic blueprint reading and construction of cable layouts as well as applying code standards. The course will provide hands-on experience in the lab and on site.

**ELE 122\* Residential Wiring I** 4  
An introductory course on residential wiring methods that includes practical application hand-on experience in implementing National Electrical Code (NEC) requirements.

**ELE 131\* Commercial Construction Wiring and Design** 6  
This course provides an introduction to the high intensity lighting systems used in commercial and industrial locations. The course will examine types of structures, location, types of equipment, and requirements of the National Electrical Code. Emphasis will be on how to install, maintain, and troubleshoot each system. The course will cover the application of lighting systems appropriate to the construction site, as well as wiring methods such as conduit, cable trays, surface metal raceways, rigid non-metallic conduits, and others, depending on the commercial application.

**ELE 132\* Commercial Wiring I** 4  
An introductory course on commercial wiring methods that includes practical applications and hands-on experience in implementing code requirements. This course of instruction will introduce the student to an environment much different than that of residential construction. In commercial applications, students have to look at types of structures, location, types of equipment, and requirements of the National Electrical Code (NEC). The course introduces student to the high intensity lighting systems used in commercial and industrial locations. Students learn how to install, maintain, and troubleshoot each system. Students will also receive instruction on application of different lighting systems to suit the application

# CATALOG COURSE LISTING WITH PREREQUISITES

encountered. The course also provides instruction about wiring methods such as conduit, cable trays, surface metal raceways, rigid non-metallic conduits, and those of other wiring methods used to meet certain locations in commercial applications.

## **ELE 141\* Journeyman Exam Preparation NEC I 1**

The purpose of this course is to introduce the Block and Associates exam. The course focuses on the makeup of the tests, the best use of time, highlighting text in the code book, and many other helpful testing ideas. The course will also provide sample exams and explain how to identify weaknesses and areas needing improvement.

## **ELE 151\* Industrial Construction Wiring and Design 6**

This course will examine requirements and designs used for the industrial wiring environment. The course will focus on the study of transformers — single and three phases are begun — as well as connection of these systems and voltages found. The course will also provide an introduction to the requirements for plant automation.

## **ELE 161\* Electric Motor Operation and Control 6**

This course will begin a study of electrical motors and systems used to control their operation. The course will cover the fundamentals of single and three phase motors along with their operational characteristics. The course will also focus on the language of control, ladder diagram, logical operational sequences, connection control sequences, diagramming, and troubleshooting. Voltages and systems presented are those found in most industrial locations. The code ruling is used during this course.

## **ELE 172\* Fundamentals of Programmable Logic Controllers 2**

This course provides an introduction to programmable logic controllers (PLCs) and their industrial and commercial applications. The course will cover the fundamentals of operation, installation, and programming. *PreReq: This course is for students who have completed all the motor control requirements.*

## **ELE 181\* Journeyman Exam Preparation NEC II 1**

This course continues preparation for the Block and Associates exam. The course focuses on the makeup of the tests, the best use of time, highlighting text in the code book, and many other helpful testing ideas. The course will also provide sample exams and explain how to identify weaknesses and areas needing improvement. *PreReq: ELE 141*

## **ELE 195\* Occupational Work Experience 0**

Occupational Work Experiences are available to students who have completed at least 85% of their required course hours. This is an optional course for students wanting practical experience at local businesses or other approved sites.

## **ENG 095 Fundamentals of Reading & Writing 5**

This course is designed to develop student proficiency in college reading and writing. In this course students will apply analytical and critical reading skills to a variety of texts and will develop skills in the writing process. In addition, students will gain skills in document design, researching, and documentation. Upon completion, students should be able to recognize and use various patterns of text

organization and compose effective paragraphs and short essays. Students should also improve critical thinking, enlarge working vocabulary, improve reading skills, and increase reading speed.

*PreReq: Assessment*

## **ENG 096 Fundamentals of Reading & Writing 3**

This course is designed to develop student proficiency in college reading and writing. In this course students will apply critical thinking skills, critical reading skills, and writing skills to narrative and expository texts. In addition, students will develop skills in document design, researching, and documentation. Upon completion, students will be able to demonstrate effective skills in reading comprehension, analysis, and evaluation of college texts, as well as effective writing skills necessary to succeed in ENG 101 College English I and in the workforce. *PreReq: Assessment*

## **ENG 101 Composition I 3**

This course provides instruction and practice in the principles of written composition. The major emphasis is on improving the ability to organize and express thoughts clearly and effectively. Students will be expected to write coherent essays that declare and support a thesis, as well as use and document research material. A reading text is used for criticism and discussion. This course is required for all degree programs. *PreReq: ENG 096 or assessment*

## **ENG 102 Composition II: Literature and Research 3**

This is the second of a two-course sequence in college English composition. The course will continue to emphasize improving the ability to organize and express thoughts in clear, effective writing. The course will use literature study as a basis for improving and extending research, critical analysis, and writing skills. The forms, elements, and techniques of literature will be examined in terms of how literature affects readers. *PreReq: ENG 101*

## **ENG 103 Composition II: Rhetoric and Research 3**

This is the second of a two-course sequence in college English composition. The course will continue to emphasize improving the ability to organize and express thoughts in clear, effective writing. The course will also place emphasis on writing practices/processes (pre-writing, drafting, revision) as well as reinforcement of rhetoric as the art of persuasion. Critical thinking skills are developed in many areas (identifying and understanding scholarly or credible sources, integrating others' perspectives into one's own argument, analyzing audience). *PreReq: ENG 101*

## **ENG 104 Intro to Literature 3**

This course will enable the student to discuss and interpret representative English-language literary works in a variety of genres. The student will identify the use of literary elements; recognize relationships between writers, works, and socio-cultural contexts; and arrive at informed personal and critical interpretations. Various thematic approaches may be offered.

**ENG 110 Technical Composition** 3  
This course focuses on using rhetorical writing methods applied to technical fields. Students will practice organizing technical subject matter and arranging and supporting writing with facts. Analysis and explanation, advocacy and argument, and academic and professional discourse will be explored. The course will also cover audience analysis. *PreReq: ENG 096 or assessment*

**ENG 201 Advanced Composition** 3  
This course provides additional training in writing for individuals who have completed College English I and II. The course will focus on advanced rhetorical techniques, sentence structure, idea development, and writing style. *PreReq: ENG 101, ENG 102*

**ENG 202 American Literature I** 3  
This course provides a survey of significant writers, works, and developments in American literature from around 1620 to 1885.

**ENG 203 English Grammar** 3  
This course is designed to provide a comprehensive examination of English grammar and to serve as a foundation for further linguistic study. The course will provide an intensive study of grammar and the application of grammatical principles to composition, emphasizing a functional approach to both sentence structure and punctuation. This course is especially recommended for students majoring in the areas of language instruction or public communication, including English, ESL, foreign language, journalism, speech, theatre, radio, television, education, business, and pre-law. *PreReq: ENG 101*

**ENG 205 Old Testament Literature** 3  
This course provides a survey of the Old Testament as a literary work. The course will emphasize literary characteristics and the cultural and historical contexts of various books of the Old Testament and Apocrypha.

**ENG 207 Narrative Film** 3  
This course is designed to provide an introduction to the history and conventions of narrative film. The focus of the course will be on narrative form and film's story-telling techniques and capabilities. *PreReq: ENG 102*

**ENG 208 Introduction to the Short Story** 3  
The purpose of this course is to provide a study of the literary genre of the short story, with emphasis on critical analysis and appreciation. The basic elements of short fiction, such as point of view, plot, character, and theme will be discussed and analyzed in terms of how they are applied in individual stories by major writers from various periods and countries. The purpose of such analysis will be to help students understand, appreciate, and enjoy more fully the reading of short fiction.

**ENG 209 American Literature II** 3  
This course provides a survey of the significant writers, works, and developments in American literature from roughly 1865 to the present.

**ENG 210 World Literature I** 3  
This course focuses on the scope of world literature with selections generally regarded as masterpieces. The time range represented by the selections is wide, roughly from 2000 BCE to 1650 CE.

**ENG 211 World Literature II** 3  
This course focuses on the scope of world literature with selections generally regarded as masterpieces. The time range represented by the selections is wide, roughly from 1650 CE to the present.

**ENG 212 English Literature I** 3  
This course provides a survey of the significant writers, works, and developments in English literature from the Middle Ages through the Eighteenth Century.

**ENG 213 English Literature II** 3  
This course provides a survey of the significant writers, works, and developments in English literature from the Nineteenth Century Romantic writers through the Twentieth Century.

**ENG 223 Creative Writing** 3  
This course is designed to give students an opportunity to write and develop skills in various genres of creative writing, such as fiction, poetry, and drama. Students may do some work in each area but will be able to focus on the genre of their choice. Basic elements of creative writing will be discussed, and students will work on several creative projects in a workshop format. In addition to the instructor providing evaluation and guidance, students themselves will be an audience for the writing done in the class and will give feedback, interaction, and critiques of other students' work.

**ENO 116 Introduction to Enology** 3  
This introductory course is designed to provide students with an understanding of winemaking principles, including history, grape growing, chemistry, wine microorganisms, fermentation, and winery operations. It is intended for entrepreneurs to explore business opportunities and winery employees to gain career development. Coursework is expected to integrate lecture, discussion, guest presenters, and field trips to operating vineyards and wineries. Students will make wine at home from a kit, track fermentation, make various chemical measurements, and provide one bottle of finished wine at the conclusion of the course.

**ENO 130 Intermediate Enology** 3  
This intermediate course is built on the fundamentals of science and technology in wine making practices taught in Introduction to Enology. During this course, students will understand how the whole wine making practice works and learn the scientific background for any decisions made during the process of wine making. At the completion of the course, students will understand wine making calculations necessary for accurate, precise, and safe additions to the wine. This class emphasizes the practical aspects to growing grapes and making wine. *PreReq: ENO 116*

**ENO 148 Winery Sanitation** 3  
This is a course in the basic science and technology of winery sanitation. The course serves as an introduction to wine microbiology and covers all methods used for winery sanitation, including but not limited to premises, tanks, pumps, filters, oak barrels and sampling equipment, chemical agents, reagents, and thermal

## CATALOG COURSE LISTING WITH PREREQUISITES

treatments leading to sterile bottling. Environmental issues and compliance are also addressed. *PreReq: ENO 116 or permission*

### **ENO 160 Winery Equipment Operations** 2

This course covers process technologies and process systems that are used in modern commercial wineries. The course will include lectures, demonstrations, and two-day workshops and will provide an overview of wine-making systems, including wine making operations and equipment, barrel aging and barrel management, membrane separation processes, specialized contacting systems, cleaning and sanitation systems, process control systems, refrigeration systems, air conditioning and humidity systems, electrical systems, waste water systems, solid waste handling, and work place safety. *PreReq: ENO 116 or permission*

### **ENO 210 Introduction to Wine Microorganisms** 2

This course is an introduction to the variety of both beneficial and harmful microorganisms frequently encountered in the wine making process. Topics include identification, physiology, morphology, and biochemistry of various wine microorganisms. *PreReq: ENO 116 or permission*

### **ENO 257 Fall Winery Production Technology** 3

This course is designed for the individual anticipating a career in the wine industry. This course (practicum) is designed to provide a student who has completed major course sequences with an intense level of practical and realistic winery operation experiences sufficient to equip him or her with sufficient skills and work experience for an entry-level position in the wine industry. Students involved in this program will participate in a full time Crush Season practicum at a supporting winery and are expected to use the time and opportunities to further their understanding of the wine making process and common winery operations. A minimum of 120 hours of field practicum are required along with a daily journal of practicum experiences. *PreReq: ENO 130, ENO 148, ENO 160, or permission*

### **ENO 259 Cellar Operation Technology** 2

This course is designed to provide students initiated in the field of enology with actual and practical exposure to the technology of wine making as it is performed during the passive vineyard periods associated with winter. The student is expected to improve his/her understanding of the methods and science involved by on-site participation in each of the various activities associated with finished wine production. The course may qualify as experience for those seeking employment in commercial enology. A minimum of 80 hours of field practicum are required along with a daily journal of practicum experiences. *PreReq: ENO 257*

### **ENO 266 Sensory Evaluation** 3

This course is intended for students who need to develop an understanding of the principles of sensory evaluation used in commercial wine making. It will also be of benefit to the wine enthusiast who is interested in reaching advanced levels of appreciation as well as to the producer, the wine merchant, and ultimately the enologist, who, by the nature of their profession, need to discern flavors and establish tasting benchmarks. Students will utilize sensory kits and

workshops to further their sensory evaluation skills and techniques. Students must be at least 21 years old to enroll in this class.

*PreReq: ENO 116 or permission*

### **ENO 268 Wine and Must Analysis** 3

This course is designed to provide students with an understanding of the principles of grape juice and wine analysis and the reasons for use of each analysis. Analyses of a practical and useful nature are chosen for the laboratory exercises demonstrating various chemical, physical and biochemical methods. Students will participate in workshops and hands-on experiences at participating wineries. *PreReq: ENO 116 and PS 107 or permission*

### **GEO 212 World Regional Geography** 3

This course provides a general survey of the distinguishing geographic characteristics of the major regions of the world. Emphasis is placed on the physical, cultural, historic, and economic aspects of each region. The course is designed to meet the needs of students majoring in education, social science, or geography, as well as students interested in attaining a global perspective

### **HIS 101 United States History I** 3

This course provides a survey of United States history from European beginnings through the Reconstruction period after the Civil War. The course considers the changing configurations of American culture and its modes of expression, religion, politics, and literature. Also covered are the rise of the Federalists, the War of 1812, the emergence of the Jacksonian Movement, westward expansion, war with Mexico, and the Civil War. Special emphasis will be placed on economic, political, and social forces from colonial times to the Civil War.

### **HIS 102 United States History II** 3

This course provides a survey of United States history from post-Civil War Reconstruction to the present. The course considers the changing configurations of American culture and its modes of expression, religion, politics, and literature. Emphasis will be placed on the changing role of the government in the lives of people and on the changing position of the United States in world affairs. The course will also cover the impact of industrialism, imperialism, two world wars, and the Cold War on the policies of the United States.

### **HIS 103 History of Western Civilization I** 3

This course provides a survey of the development of western culture and institutions from the ancient world to the time of the European Renaissance and Reformation. The course will cover the civilizations of the Ancient Near East, Greece, and Rome, as well as the development of European nations from the early Middle Ages to the High Middle Ages. Emphasis will be on political, social, religious, and cultural life. The course will also cover the rise of Christianity and its importance from the end of the Roman Empire through the rise of European civilization in the Middle Ages.

**HIS 104 History of Western Civilization II** 3  
This course provides a survey of the history of Europe from the Reformation and Renaissance to the present. The spiritual, intellectual, social, political, and economic foundations will be covered, with emphasis on the religious wars of the 16th century, the Age of Absolutism of the 17th and 18th centuries, and the American and French Revolutions of the 18th century and the many European revolutions of the first half of the 19th century. The course will also cover the breakdown of order in the early 20th century which led to World War I and World War II, the aftermath of World War II, the Cold War, and the fall of the Soviet Union.

**HIS 202 Introduction to Ancient History** 3  
This course provides a survey of the political, social, and economic development of Mesopotamia, Asia Minor, Greece, and Rome from the Paleolithic times to A.D. 500. The course will review the history of the ancient world from 5000 B.C. to the collapse of the Roman Empire. Emphasis will be placed on reviewing the similarities and differences between various cultures and civilizations. The course will also examine the influence the past has had on the modern world and the impact the ancient world has had on the way the modern world views the arts, government, education, religion and ethics.

**HIS 204 Readings in Western Civilization I** 3  
This interdisciplinary course critically examines the ideas and values of Western culture from ancient beginnings in Mesopotamia, the Near East, Greece, and Rome through the Middle Ages, Renaissance, Reformation, and the beginning of the modern period.

**HS 101 Introduction to Health Information** 4  
This course provides an introduction to health information management and healthcare delivery systems in the United States. The course will focus on the roles of health professionals, types of healthcare organizations, types and levels of healthcare delivery systems, healthcare governing bodies, content and structure of the health record, documentation requirements for health records in various healthcare settings to ensure clinical coders are familiar with basic health data structure, content and standards; healthcare delivery systems; and information technology and systems.

**HS 103 Legal and Ethical Issues in Healthcare** 3  
This course introduces the U.S. legal system, laws, and ethical issues and how they relate to health care. Emphasis is placed on legal and compliance issues faced by clinical coders in the workplace setting.

**HS 105 Insurance and Health Information Compliance** 3  
This course introduces the study of the uses of coded data and health information in reimbursement and payment systems appropriate to all healthcare settings and managed care. Topics will include contemporary prospective payment systems and key health plans, charge master maintenance, and evaluation of fraudulent billing practices.

**HS 109 Pharmacology for Allied Health Professionals** 3  
This course introduces the principles of pharmacology, drug classifications, and the effects of selected medication on the human

body. The course will cover drug classifications, use of generic name drugs, trade drugs, and drugs to treat various body systems. Emphasis is placed on understanding the actions of the drugs, such as absorption, distribution, metabolism, and excretion of drugs by the body, and matching drugs to common conditions and laboratory findings. This course does not meet the current requirements for nursing.

**HS 110 Pathopharmacology for Health Science** 4  
This course is designed for the Health Science student to study diseases and disorders that affect the various body systems and the principles of pharmacology, drug classifications, and the effects of selected medication on the human body. This course will focus on diseases of each body system including cause, diagnosis, and treatment. Emphasis is also placed on understanding the actions of the drugs, such as absorption, distribution, metabolism, and excretion of drugs by the body, and matching drugs to common conditions and laboratory findings. This course does not meet the current requirements for nursing.

**HS 112 Pathophysiology for Allied Health Professionals** 3  
This course is designed for the Allied Health student to study diseases and disorders that affect the various body systems. This course will focus on diseases of each body system including cause, diagnosis, and treatment. This course does not meet the current requirements for nursing. *PreReq: A C or higher in BS 104, BS 105 and BS 109*

**HS 115 International Classification of Disease (ICD) Coding I 3**  
This course helps the student develop an understanding of coding and classification systems in order to assign valid diagnostic and/or procedure codes. It will include the validation of coded clinical information, and case mix/severity of illness data. The course will focus on basic diagnosis coding skill and guidelines associated with International Classification of Diseases, Clinical Modification (ICD-CM). *PreReq: A C or higher in BS 104, BS 105, and BS 109*

**HS 118 Current Procedural Terminology (CPT) Coding I** 3  
This course helps the student develop an understanding of coding and classification systems in order to assign valid diagnostic and/or procedure codes. It will include the validation of coded clinical information, and case mix/severity of illness data. The course will focus on basic diagnosis coding skills and guidelines associated with Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS). *PreReq: A C or higher in BS 104, BS 105, and BS 109*

**HS 120 Healthcare Computer Applications and Electronic Encoder** 3  
This course is designed for the Health Science student to study diseases and disorders that affect the various body systems and the principles of pharmacology, drug classifications, and the effects of selected medication on the human body. This course will focus on diseases of each body system including cause, diagnosis, and treatment. Emphasis is also placed on understanding the actions of the drugs, such as absorption, distribution, metabolism, and excretion of drugs by the body, and matching drugs to common

*\*indicates a technical course*

## CATALOG COURSE LISTING WITH PREREQUISITES

conditions and laboratory findings. This course does not meet the current requirements for nursing. *PreReq: BUS 130*

**HS 125 International Classification of Disease (ICD) 3**  
International Classification of Disease (ICD) Procedural Coding Systems This course helps the student develop an understanding of coding and classification systems in order to assign valid diagnostic and/or procedure codes. It will include the validation of coded clinical information, and case mix/severity of illness data. The course will focus on diagnosis coding skill and guidelines associated with International Classification of Diseases Procedural Coding System (ICD/PCS). *PreReq: A C or higher in HS 115 or permission (ICD/PCS).*

**HS 130 Reimbursement Methodologies (Physician) 3**  
Study the uses of coded data and health information in reimbursement and payment systems appropriate to all healthcare settings and managed care. Includes contemporary prospective payment systems and key health plans, charge-master maintenance, and evaluation of fraudulent billing practices.

**HS 210 International Classification of Disease ICD Coding II 3**  
This course helps the student develop an understanding of coding and classification systems in order to assign valid diagnostic and/or procedure codes. It will include the validation of coded clinical information and case mix/severity of illness data. The course will focus on more advanced diagnosis coding skills and guidelines associated with International Classification of Diseases, Clinical Modification (ICD-CM). *PreReq: A C or higher in HS 115*

**HS 218 Current Procedural Terminology (CPT) Coding II 3**  
This course helps the student develop an understanding of coding and classification systems in order to assign valid diagnostic and/or procedure codes. It will include the validation of coded clinical information and case mix/severity of illness data. The course will focus on more advanced diagnosis coding skills and guidelines associated with Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS). *PreReq: A C or higher in HS 118*

**HS 225 Healthcare Coding Practicum 3**  
To provide the student with coding practices in a hospital, physician's office, clinical, or other healthcare setting, with directed projects common to a clinical coding specialist on the job. This course will reinforce skills developed in the medical coding program and provide an opportunity to perform these skills in the workplace. *PreReq: Permission*

**HVA 101\* Occupational Safety 1**  
This course is designed to provide students with an appreciation and basic understanding of the safety rules and regulations that govern the construction industry. Students will also learn and apply safe work habits and the use of hand and power tools as well as the handling use and application of hazardous materials.

**HVA 102\* Blueprint Reading/Sketching 2**  
This course will introduce students to a basic set of house plans, including the plan views, elevations, framing, wall section, and details. Students will be able to read these prints and sketch details and layouts of specific items that relate to their occupational area.

**HVA 103\* Hand/Power Tools 1**  
This course will introduce students to the various hand and power tools used in the construction industry, specifically related to those in the HVAC occupational area. The correct and safe use of hand and power tools will be emphasized. Students will be required to pass a written and performance safety test on all power equipment used in their program area.

**HVA 106\* Technical Math 2**  
This course is designed to provide students a review of the basic principles of math, which include whole numbers, common and decimal fractions, ratio proportions and percent algebra, the metric system, and basic geometric shapes and graphs.

**HVA 110\* Theory of Refrigeration 3**  
This course in refrigeration is designed to include how mechanical refrigeration operates. This includes the following: heat and heat flow, temperature measurement, pressure and state of matter, as well as the laws of refrigeration.

**HVA 115\* Electrical Magnetic Fundamentals 3**  
"This course covers generating electricity, types of electricity, direct and alternating current circuit fundamentals, magnetism, and electrical components.

**HVA 121\* Domestic Refrigeration 3**  
This course includes terminology associated with domestic refrigeration, identification of types of domestic refrigeration, location of data plates, and their purpose. Also covered will be sealed system components, what their functions are and how they operate, as well as locating and solving programs in a domestic refrigeration system in a safe manner.

**HVA 126\* Plumbing I 3**  
This course is designed to provide an understanding of the plumbing system of a structure including water supply distribution pipes; fixtures and fixture traps; soil, waste and vent pipes; building drains and building sewers; storm water drainage and their devices; appurtenances and connections within the building and outside the building within the property lines. All plumbing is taught to specifications of the Uniform Plumbing Code.

**HVA 136\* Electric Circuits & Controls 3**  
This course includes electric control circuits in ladder diagram and pictorial form. Also covered will be icemaker diagrams, comfort cooling controls, central air-conditioning controls, pressure motor controls, motor safety controls, defrost controls, and humidity controls. *PreReq: HVA 115*



**HVA 145\* Sheet Metal 3**

This course introduces the student to pattern development and fabrication of fittings used in the heating/air conditioning industry. Installation in a safe and proper manner is covered.

**HVA 156\* AC Heating & Cooling 3**

This course covers terminology associated with heating and humidification. Heating equipment covered will include; gas heating systems, hydraulic heating, electric heating, and oil heating. In addition, humidification will be covered. Also covered. *PreReq: HVA 136*

**HVA 170\* AC Control Systems 3**

This course is designed to help students to understand the operation of the control systems in heating and cooling equipment as well as heat pump control systems. Sequence of operation of the controls will be covered. *PreReq: HVA 156*

**HVA 175\* Commercial Refrigeration 3**

This course includes the study of condensing units, condensers, refrigerant controls, evaporators, and other components used in commercial refrigeration systems, as well as diagnosing, testing, servicing and repair of commercial equipment. Safety for the technician, customer, and equipment is also covered.

**HVA 181\* Plumbing II 3**

This course is a continuation of Plumbing I dealing with the development of technical skills and knowledge of the trade. *PreReq: HVA 126*

**HVA 195\* Occupational Work Experience 0**

Occupational Work Experiences are available to students who have completed 85% of their required course hours. This is an optional course for HVAC technology students who wish to gain further "real life" experiences.

**IDS 110 Contemporary Issues in Sustainability 3**

This interdisciplinary course is designed to introduce students to diverse global perspectives and practical personal solutions related to long-term sustainability. The course focuses on the impact personal and professional decisions have on the global condition and how those decisions can support the objectives of sustainability: economic viability, environmental integrity, and social equity. Topics covered will include energy, food, land use, water, air, waste, housing, personal health, and community. Instruction will be provided by a team of faculty, staff, and practitioners of sustainable living.

**IDS 120 Introduction to Leadership Concepts 3**

This interdisciplinary course is designed to introduce students to the academic discipline of leadership. The course focuses on the study of leadership development through the examination of leadership theory and research, identity development, self-awareness, awareness of others and the application of leadership theories, concepts, and skills.

**IDS 130 Culture and Context 3**

This interdisciplinary leadership course is designed to discover and examine personal cultural identity from a values based perspective. The course will focus on strategies and skills needed to analyze intercultural experiences, events, and dilemmas. The concepts of power and privilege will be discussed as psychological constructs operating across all cultures and contexts. *PreReq: IDS 120 and sophomore standing.*

**IWT 105\* Welding Safety 1**

This course will provide information on safety issues, equipment, and procedures in the field of industrial welding. The course will cover job and site hazards, safety precautions, personal protective equipment, procedures, and practices. Fire prevention techniques will also be covered.

**IWT 115\* Cutting Processes 3**

This course will cover the cutting equipment and processes used in the welding trade. The course will include set up, operation, and shut down of various cutting equipment. Safety and inspection for quality will be emphasized.

**IWT 125\* Shielded Metal Arc Welding 3**

This course will provide instruction and experience in the Shielded Metal Arc Welding (SMAW) process. The course will cover setting up the SMAW workstation, electrode classification, selection, and use, welding, and inspection.

**IWT 135\* Gas Metal Arc Welding 3**

This course will provide instruction and experience in the Gas Metal Arc Welding (GMAW) process. The course will cover setting up the GMAW workstation, electrode classification, selection, and use, welding, and inspection.

**IWT 145\* Gas Tungsten Arc Welding 3**

This course will provide instruction and experience in the Gas Tungsten Arc Welding (GTAW) process. The course will cover setting up the GTAW workstation, electrode classification, selection, and use, welding, and inspection.

**IWT 162\* Blueprint Reading 4**

This course will provide an introduction to reading blueprints related to industrial welding. The course will cover basic lines, views, and abbreviations, as well as interpretation of basic 3-D sketches. The course will also include applicable mathematical operations, measuring, scale ratios, identification of welding joints and symbols, and interpreting a bill of materials.

**IWT 175\* Shielded Metal Arc Welding II 5**

This course will continue instruction and experience in Shielded Metal Arc Welding (SMAW). The course will cover safety issues, equipment repairs, setting up a complete SMAW system, operation of equipment, surface repairs, groove welds, and thickness qualification tests. *PreReq: IWT 125*

## CATALOG COURSE LISTING WITH PREREQUISITES

**IWT 180\* Gas Metal Arc Welding II** 5  
This course will continue instruction and experience in Gas Metal Arc Welding (GMAW). The course will cover safety issues, equipment repairs, setting up a complete GMAW system, operation of equipment, surface repairs, groove welds, and thickness qualification tests. *PreReq: IWT 135*

**IWT 185\* Gas Tungsten Arc Welding II** 5  
This course will continue instruction and experience in the Gas Tungsten Arc Welding (GTAW) process. The course will cover safety issues, equipment repairs, setting up a complete GTAW system, operation of equipment, surface repairs, 5G welds, and qualification tests. *PreReq: IWT 145*

**IWT 190\* Blueprint Reading II** 3  
This course will continue instruction and experience in blueprint reading related to industrial welding. *PreReq: IWT 162*

**IWT 195\* Occupational Work Experience** 0  
Occupational work experiences are available to students who have completed 85% of their required course hours. This is an optional course for welding students who wish to gain practical experience at local businesses and industries or other approved sites.

**LG 100 Conversational Spanish** 2  
This course emphasizes the development of basic Spanish communications skills through practice in listening, speaking, reading, and writing. It is designed to introduce students to skills necessary for casual conversation and career specific situations.

**LG 101 Spanish I** 5  
This course covers the fundamentals of Spanish pronunciation, vocabulary building, conjugation of the present tense, and introduction of two past tenses. The course will provide practice in understanding and speaking simple phrases, elementary reading and writing, and some study of the culture of people in countries where Spanish is spoken.

**LG 102 Spanish II** 5  
This course builds on Spanish I and provides continued emphasis on pronunciation, vocabulary building, speaking, and understanding modern Spanish. Focus will be on elementary reading and basic writing skills as well as the study of the culture of Latin America and Spain. Review of the present tense is continued. The course will introduce the preterite tense and irregulars, the future, conditional, and perfect tenses, and subjunctive-introduction to present. Direct and indirect object pronouns, reflexive pronouns, command forms, sequencing, and storytelling will also be covered. *PreReq: LG 101*

**LG 105 American Sign Language** 3  
This course offers a basic study of American Sign Language (ASL), the language used by the deaf community in the United States. The course covers the fundamentals of ASL grammar, vocabulary, finger spelling, numbers, visual-gestural communication, and information related to deaf culture.

**LG 106 American Sign Language II** 3  
This course continues study begun in LG 105 and will focus on continued development of American Sign Language (ASL) skills, concentrating on comprehension and production. The course will also provide information about the linguistic and cultural features relevant to language learning.

**LG 201 Spanish III** 3  
This course builds on Spanish II and provides continued emphasis on pronunciation, vocabulary building, speaking, and understanding modern Spanish. Focus will be on intermediate listening, speaking, reading, and writing skills, using a variety of tenses and moods, as well as the continued study of the culture of Latin America and Spain. Expanded review and practice using the present, preterite, imperfect, future, and conditional tenses and the imperative, indicative, and subjunctive moods will be continued. Sequencing and storytelling will also be continued. Por and para, comparatives and superlatives, prepositions, and the subjunctive in noun, adjective, and adverbial clauses will be covered and incorporated in the demonstration of appropriate interpretation and response to Spanish language input. *PreReq: LG 102 or permission*

**LS 102 Children's Literature** 3  
This course is designed to introduce students to the field of children's literature. The course will cover the theories, history, and types of children's literature. Emphasis will be on giving students the ability to evaluate and select appropriate literature for various ages of children. The course is recommended for elementary education and library science majors, and at some institutions, is a requirement for those majors. Course material, however, will be broad enough to accommodate anyone with an interest in the field of children's literature.

**M 101 Music Fundamentals** 3  
This course covers the basics of music, including symbols, rhythm, and scale construction. The course also introduces reading and dictation in two or three parts, the minor modes and chromatics, eye and ear study through the simple modulations, and transpositions.

**M 103 Music History and Appreciation** 3  
This course provides an introduction to music as an art form. The course will cover the basic elements of music and historically significant style periods and composers. The course will also emphasize the concept of music as self-expression.

**M 105 Applied Keyboard I** 1  
This course offers private lessons on piano and/or electronic keyboard for music majors or non-music majors interested in developing their skills. *PreReq: Permission*

**M 106 Applied Keyboard II** 1  
This course offers private lessons on piano and/or electronic keyboard for music majors or non-music majors interested in developing their skills. *PreReq: M 105 or permission*

**M 107 Applied Music I (Vocal) 1**  
This course offers private lessons for students interested in developing vocal performance skills.

**M 108 Applied Music II (Vocal) 1**  
This course offers private lessons for students interested in developing vocal performance skills. *PreReq: M 107*

**M 111 Applied Music I (Instrumental) 1**  
This course provides private lessons on primary instruments for music majors or non-music majors interested in developing their skills. *PreReq: Permission*

**M 112 Applied Music II (Instrumental) 1**  
This course provides private lessons on primary instruments for music majors or non-music majors interested in developing their skills. *PreReq: M 111 or permission*

**M 113 Vocal Ensemble - Lads and Lassies I 1**  
This course is designed for both music majors and other students interested in performing with a stage vocal ensemble that features various styles of music along with choreography and props. The ensemble also travels within the College service area to perform. This course provides an opportunity for musical self-expression and continued development of individual and ensemble music skills. *PreReq: Permission*

**M 114 Vocal Ensemble - Lads and Lassies II 1**  
This course is designed for both music majors and other students interested in performing with a stage vocal ensemble that features various styles of music along with choreography and props. The ensemble also travels within the College service area to perform. This course provides an opportunity for musical self-expression and continued development of individual and ensemble music skills. *PreReq: Permission*

**M 115 Chorus I 1**  
This course is designed for both music majors and other students interested in performing with a stage vocal chorus that features various styles of music along with choreography and props. The chorus also travels within the College service area to perform. This course provides an opportunity for musical self-expression and continued development of individual and choral music skills.

**M 116 Chorus II 1**  
This course is designed for both music majors and other students interested in performing with a stage vocal chorus that features various styles of music along with choreography and props. The chorus also travels within the College service area to perform. This course provides an opportunity for musical self-expression and continued development of individual and choral music skills. *PreReq: M 115*

**M 119 Wind Ensemble I 1**  
This course is designed for both music majors and other students interested in performing with a wind and percussion ensemble. The course provides opportunities for musical self-expression and continued development of individual and ensemble music skills.

**M 120 Wind Ensemble II 1**  
This course is designed for both music majors and other students interested in performing with a wind and percussion ensemble. The course provides opportunities for musical self-expression and continued development of individual and ensemble music skills. *PreReq: M 119*

**M 130 Pep Band I 1**  
This course is for both music majors and other students interested in performing with a pep band at home football and basketball games. The course offers opportunities for musical self-expression while providing a service for the College's athletic community.

**M 131 Pep Band II 1**  
This course is for both music majors and other students interested in performing with a pep band at home football and basketball games. The course offers additional opportunities for musical self-expression while providing a service for the College's athletic community. *PreReq: M 130*

**M 135 Aural Skills I 2**  
This course provides an aural study of melodies, intervals, harmonies, rhythms, and meters. *CoReq: M 200*

**M 145 Aural Skills II 2**  
This course provides additional aural study of melodies, intervals, harmonies, rhythms, and meters. *CoReq: M 201, M 135*

**M 152 Opera Production I 1**  
This course is designed for dance and music students and others interested in participating in a stage vocal and dance ensemble that prepares and performs the role of the chorus with a professional opera company. The course provides opportunities for artistic self-expression and continued development of individual and ensemble skills, while offering exposure to the performance arts as a profession. *PreReq: Permission*

**M 153 Opera Production II 1**  
This course is designed for dance and music students and others interested in participating in a stage vocal and dance ensemble that prepares and performs the role of the chorus with a professional opera company. The course provides opportunities for artistic self-expression and continued development of individual and ensemble skills, while offering exposure to the performance arts as a profession. *PreReq: M 152 and permission*

**M 154 Group Piano I 1**  
This course is designed to develop functional keyboard skills needed in the music classroom or for personal enjoyment.

**M 155 Group Piano II 1**  
This course is designed to develop intermediate keyboard skills needed in the music classroom or for personal improvement and enjoyment. *PreReq: M 154*

**M 162 Introduction to World Music 3**  
This course will provide an introduction to music across the world. The basic elements of music and musical style from specific

## CATALOG COURSE LISTING WITH PREREQUISITES

regions will be studied. The course will also emphasize music as self-expression.

### **M 200 Music Theory I** 3

This course will provide a study of the harmonic systems used in musical composition from approximately 1650 to 1900, including mastery of scales, keys, intervals, rhythms, and basic triads. The course will cover simple four-part writing, triad inversions, non-chord tones, secondary chords, and dominant seventh chords. Students will also analyze chorales, hymns, and representative literature from recognized style periods. *CoReq: M 135 PreReq: A C or higher in M 101 or permission*

### **M 201 Music Theory II** 3

This course will provide more advanced study of the harmonic systems used in musical composition from approximately 1650 to 1900, including mastery of scales, keys, intervals, rhythms, and basic triads. The course will cover simple four-part writing, triad inversions, non-chord tones, secondary chords, and dominant seventh chords. Students will also analyze chorales, hymns, and representative literature from recognized style periods. *PreReq: A C or higher in M 200 CoReq: M 145*

### **M 205 Pep Band III** 1

This course is for both music majors and other students interested in performing with a pep band at home football and basketball games. The course offers additional opportunities for musical self-expression while providing a service for the College's athletic community. *PreReq: M 131*

### **M 206 Pep Band IV** 1

This course is for both music majors and other students interested in performing with a pep band at home football and basketball games. The course offers additional opportunities for musical self-expression while providing a service for the College's athletic community. *PreReq: M 205*

### **M 207 Applied Music III (Vocal)** 1

This course offers private lessons for students interested in developing vocal performance skills. *PreReq: M 108*

### **M 208 Applied Music IV (Vocal)** 1

This course offers private lessons for students interested in developing vocal performance skills. *PreReq: M 207*

### **M 211 Applied Music III (Instrumental)** 1

This course provides private lessons on primary instruments for music majors or non-music majors interested in developing their skills. *PreReq: M 112 or permission*

### **M 212 Applied Music IV (Instrumental)** 1

This course provides private lessons on primary instruments for music majors or non-music majors interested in developing their skills. *PreReq: M 211 or permission*

### **M 213 Vocal Ensemble - Lads and Lassies III** 1

This course is designed for both music majors and other students interested in performing with a stage vocal ensemble that features various styles of music along with choreography and props. The ensemble also travels within the college service area to perform. This course provides an opportunity for musical self-expression and continued development of individual and ensemble music skills. *PreReq: Permission*

### **M 214 Vocal Ensemble - Lads and Lassies IV** 1

This course is designed for both music majors and other students interested in performing with a stage vocal ensemble that features various styles of music along with choreography and props. The ensemble also travels within the college service area to perform. This course provides an opportunity for musical self-expression and continued development of individual and ensemble music skills. *PreReq: Permission*

### **M 215 Chorus III** 1

This course is designed for both music majors and other students interested in performing with a stage vocal chorus that features various styles of music along with choreography and props. The chorus also travels within the College service area to perform. This course provides an opportunity for musical self-expression and continued development of individual and choral music skills. *PreReq: M 116*

### **M 216 Chorus IV** 1

This course is designed for both music majors and other students interested in performing with a stage vocal chorus that features various styles of music along with choreography and props. The chorus also travels within the College service area to perform. This course provides an opportunity for musical self-expression and continued development of individual and choral music skills. *PreReq: M 215*

### **M 219 Wind Ensemble III** 1

This course is designed for both music majors and other students interested in performing with a wind and percussion ensemble. The course provides opportunities for musical self-expression and continued development of individual and ensemble music skills. *PreReq: M 120*

### **M 220 Wind Ensemble IV** 1

This course is designed for both music majors and other students interested in performing with a wind and percussion ensemble. The course provides opportunities for musical self-expression and continued development of individual and ensemble music skills. *PreReq: M 219*

### **M 223 History of Jazz** 3

This course provides a listening-based approach to the evolutionary development of America's unique jazz art form. The course will cover the American roots of jazz and its early figures, the development of various jazz styles, significant jazz musicians, and the place of jazz in modern music.

**M 225 Applied Keyboard III** 1  
This course offers private lessons on piano and/or electronic keyboard for music majors or non-music majors interested in developing their skills. *PreReq: M 106 and permission*

**M 226 Applied Keyboard IV** 1  
This course offers private lessons on piano and/or electronic keyboard for music majors or non-music majors interested in developing their skills. *PreReq: M 225 and permission*

**M 229 Aural Skills III** 2  
This course provides aural study of melodies, intervals, harmonies, rhythms, and meters. *PreReq: A C or higher in M 145, CoReq: M 233*

**M 230 Aural Skills IV** 2  
This course provides aural study of melodies, intervals, harmonies, rhythms, and meters. *PreReq: A C or higher in M 229, CoReq: M 234*

**M 233 Music Theory III** 3  
This course continues work with harmony and composition. The course will also introduce the use of 20th century techniques with melody, rhythm, form, and harmony. *PreReq: A C or higher in M 201, CoReq: M 229*

**M 234 Music Theory IV** 3  
This course continues work with harmony and composition. The course will also introduce the use of 20th century techniques with melody, rhythm, form, and harmony. *PreReq: A C or higher in M 233, CoReq: M 230*

**M 252 Opera Production III** 1  
This course is designed for dance and music students and others interested in participating in a stage vocal and dance ensemble that prepares and performs the role of the chorus with a professional opera company. The course provides opportunities for artistic self-expression and continued development of individual and ensemble skills, while offering exposure to the performance arts as a profession. *PreReq: M 153 and permission*

**M 253 Opera Production IV** 1  
This course is designed for dance and music students and others interested in participating in a stage vocal and dance ensemble that prepares and performs the role of the chorus with a professional opera company. The course provides opportunities for artistic self-expression and continued development of individual and ensemble skills, while offering exposure to the performance arts as a profession. *PreReq: M 252 and permission*

**MAT 090 Fundamentals of Math** 3  
Fundamentals of Math precedes the algebra sequence of courses. This course is designed to develop skills in the four fundamental mathematical operations using whole numbers, fractions, decimal fractions, ratio, proportion, and percent. Business and consumer applications are also included. If time permits, applied geometry and an introduction to algebra will be included.

**MAT 100 Beginning Algebra** 3  
This course focuses on basic algebra fundamentals and is designed to prepare students for the Intermediate Algebra course. *PreReq: MAT 090 or assessment*

**MAT 102 Technical Math** 3  
Technical math focuses on measurement, algebraic operations, formulas, geometry, and basic statistics, scientific notation, number systems, algebra (equations and formulas, factoring, and systems), geometry, and trigonometry. These concepts are supported by practical applications to a variety of career and technical vocations, including manufacturing, automotive, allied health, welding, building trades, and heating, ventilation, air conditioning, and plumbing. *MAT 090 or assessment*

**MAT 103 Intermediate Algebra** 3  
Intermediate Algebra is a thorough study of the fundamental laws of algebra, including adding, subtracting, multiplying, dividing, factoring, and simplifying polynomial, rational, and radical expressions. The course also will cover solving linear, quadratic, rational, and radical equations, including non-real complex solutions, as well as solving linear, compound, and absolute value inequalities. In addition, graphing linear equations, inequalities, and quadratic functions, solving systems of two equations in two variables, and using function notation will be covered, as well as applications of many of these algebraic concepts. Other topics will be included as time permits. A scientific calculator is required for this course. *PreReq: MAT 100 or assessment*

**MAT 104 College Algebra** 3  
College Algebra is a comprehensive study of the fundamental laws of algebra, including exponents, linear and quadratic equations, polynomial and rational inequalities, system of equations, radicals and radical equations, functions and graphing, polynomials and polynomial equations, modeling, logarithms, complex numbers, augmented matrices, determinants, and regression. The course will provide analysis of graphs and linear systems in two or three variables, as well as applications of most of the topics listed above and others as time permits. A graphing calculator is required for this course. *PreReq: MAT 103 or assessment*

**MAT 105 Trigonometry** 3  
College Trigonometry includes the study of circular functions and their graphs, working with the right triangle, unit circle, inverse circular functions, identities, conditional equations, the Law of Sines, the Law of Cosines, and other topics as time permits. *PreReq: MAT 104 or assessment*

**MAT 106 Calculus I** 5  
Calculus I is the first in a three-semester sequence of calculus courses. This course consists of the study of algebraic functions of one variable, the use of modern technology to enhance calculus knowledge, limits including the study of L'Hopital's Rule, differentiation and its various techniques, definite and indefinite integrals, including integration by substitution and logarithmic functions, and applications of the derivative and definite integral in geometry, science, engineer-

## CATALOG COURSE LISTING WITH PREREQUISITES

ing, business, medicine, and other fields. Other topics will be covered as time permits. *PreReq: MAT 105 or assessment*

### **MAT 107 General Calculus and Linear Algebra** 3

General Calculus is an introduction to calculus and linear algebra concepts that are particularly useful in the study of economic and business administration. This course consists of the study of algebraic functions of both one and several variables, the use of modern technology to enhance calculus knowledge, differentiation and partial differentiation and their various techniques and applications to business such as marginal analysis and optimization including Lagrange Multipliers. Other topics may be covered as time permits. *PreReq: MAT 104*

### **MAT 108 Topics in Contemporary Mathematics** 3

This course is designed to develop problem-solving skills by studying a wide range of contemporary applications of mathematics and to develop an appreciation of what mathematics is and how it is used today. The main goal of the course is to give an introduction to the power and variety of mathematical techniques that are available to an educated member of society. Some of the great ideas of mathematics and how they can be used in everyday life will be explored, including but not limited to: set theory, logic and syllogisms, graph theory, number theory, algebraic models, modeling systems for both linear equations and inequalities, voting methodology, consumer mathematics, and descriptive statistics. *This course does not satisfy the graduation requirements for an Associate in Science degree. PreReq: MAT 103 or assessment*

### **MAT 110 Calculus II** 5

Calculus II is the second in a three-semester sequence of calculus courses. This course consists of working with logarithms and other exponential functions, hyperbolic functions, inverse and hyperbolic trigonometric functions, numerous integration techniques including using tables, integration by parts, substitutions, partial fractions, improper integrals, continued work with L'Hopital's rule, sequences and series, convergence and comparison tests, using formulas to estimate integrals, and differential equations. The course also covers calculus involving three-dimensional space, vector operations including the dot product, projections, the cross product, parametric equations of lines, and three-dimensional plane operations with quadric surfaces, as well as selected topics in analytic geometry as time permits. *PreReq: MAT 106*

### **MAT 201 Calculus III** 5

Calculus III is the final course in the three-semester sequence of calculus courses. This course is designed to prepare students to be successful in Differential Equations, Vector Analysis, Statics, Dynamics, and other upper-level mathematics, science, and engineering courses. The course consists of a thorough study of polar coordinates and parametric equations, vector analysis in calculus problems, vector-valued functions, partial derivatives, centroids, directional derivatives, gradients, and multiple integrals including double integrals, triple integrals, changing variables involving polar coordinates, center of mass and moments of inertia, and many applications. In addition, there will be a thorough study of multiple

integrals and their applications, including in cylindrical and spherical coordinates and change of variables using Jacobians. Topics from the field of vector analysis, such as vector fields, line integrals, Green's Theorem applications, surface integrals including applications and flux, and the use of matrices in various operations will also be covered. *PreReq: MAT 110*

### **MAT 202 Differential Equations** 3

This course covers standard types of ordinary differential equations of first and second order, linear equations, solutions by series, and application to geometry and physical science. *PreReq: MAT 201*

### **MAT 203 Basic Statistics** 3

This course is an introductory study of the fundamentals of modern statistics and probability. The main topics covered include descriptive methods, inductive statistics, probability, estimation, and tests of hypotheses, along with other topics as time allows. *PreReq: MAT 104*

### **MOA 109\* Emergency Preparedness** 1

This course is designed to provide health care professionals with an orientation for their possible future roles in disaster response. Focus will be on the importance of staying within the scope of practice of the profession. The course will also cover being prepared to meet the expectations of their employers, volunteering effectively, and being confident and safe responders.

### **MOA 110\* Administrative Aspects I** 3

This course covers the administrative skills needed as a health care team member, including effective telephone techniques, scheduling patients for appointments, management of facilities, records management, and use of office equipment.

### **MOA 113\* Clinical Internship I** 2

This course provides practical experience in the Medical Office Assistant field by working in various medical arenas.

### **MOA 114\* Patient Care I** 4

This course focuses on the application of skills learned in the classroom and lab in the internship. The course also introduces the basics of patient care, including Medical Asepsis and Infection Control, preparing a patient for examination, acquiring vital signs, and assisting the physician with patient exams.

### **MOA 121\* Principles of Pharmacology** 3

This course presents topics essential for a thorough understanding of drug sources, legislation relating to drugs, drug references and forms of drugs, drug classifications and actions, the medication order, and basic principles.

**MOA 123\* Insurance Billing and Coding** 3  
This course covers a wide range of medical insurance topics, including types of health insurance, types of coverage, claims processing, abstracting from medical records, and current issues in medical insurance.

**MOA 125\* Medical Terminology** 3  
This course defines prefixes, suffixes, and roots used to compose medical terms. The course will cover spelling, pronunciation, definitions, and interpretation of terminology related to body structure, disease, diagnosis, and treatment.

**MOA 128\* Body Structure and Functions** 3  
This course examines the complexities of human structure and function. The course emphasizes how tissues, organs, and body systems work together to carry out complex activities such as eating, learning and responding to stress, and interaction with other structures of the body.

**MOA 133\* Administrative Aspects II** 3  
This course covers the administrative skills needed as a health care team member managing specialized patient appointment scheduling, electronic medical records, and referrals. The course also examines the financial responsibilities of medical office assistants relating to posting of charges and payments and balancing of day sheets. *PreReq: MOA 110*

**MOA 134\* Patient Care II** 3  
This course introduces cast application and removal, performing EKG's, and patient teaching. The course also covers how to prepare and administer various forms of medication. *PreReq: MOA 114*

**MOA 135\* Clinical Internship II** 2  
This course provides practical experience in the Medical Office Assistant field by working in various medical arenas. *PreReq: MOA 113*

**MOA 136\* Clinical Laboratory Procedures** 4  
This course addresses the role and function of the professional in the clinical laboratory setting. Topics include safety, Clinical Laboratory Improvement Act of 1988 (CLIA), government regulations, and quality assurance in the laboratory. The course examines concepts and procedures in different departments of the laboratory, including specimen collection and performance of CLIA 88 low and/or moderate complexity testing.

**MOA 137\* Professional Issues** 2  
This course focuses on the basic concept of professional practice of medicine and the role and function of the medical assistant. The course examines personal and professional characteristics and legal and ethical standards for medical assistants, explores professional and personal therapeutic communication, and addresses time management and goal setting.

**MOA 295\* Occupational Work Experience** 0  
This experience is designed to provide the student with purposeful occupational experience in the Medical Office Assistant field. Each experience is individualized. A training plan is created for each student in conjunction with the training site to provide experience

related to the skills and knowledge acquired in the program. Students must have completed 85% of their required course hours, be in good standing, and have instructor and administration approval.

**MT 111 Introduction to Media Technology** 3  
This course concentrates on the advanced applications of various media technologies used in a creative way to produce the College yearbook.

**MT 112 Media Technology I** 3  
This course is a continuation of MT 111. It concentrates on the advanced applications of various media technologies used in a creative way to produce the College yearbook.

**MT 113 Media Technology II** 3  
This course is a continuation of MT 111 and MT 112. This course is a continuation of MT 112. It concentrates on the advanced applications of various media technologies used in a creative way to produce the College yearbook. *PreReq: MT 113 and permission*

**MT 114 Media Technology III** 3  
This course is a continuation of MT 113. It concentrates on the advanced applications of various media technologies used in a creative way to produce the College yearbook. *PreReq: MT 113 and permission*

**NET 125\* Introduction to Net+** 3  
This course will introduce the various networking concepts and technologies for students interested in becoming network administrators. Safety and proper tool usage will be reinforced. Key topics include protocols, topologies, hardware, client and server configuration, network services, and network security. In addition, the course will provide hands-on experience in configuration, troubleshooting, and maintenance of networks.

**NET 195\* Certification Training Lab NET+** 3  
This course is designed to give the second semester student supervised practice with computerized testing. Students will apply previously learned skills and concepts in preparation for the CompTIA Network+ Examination. Practice test banks will be used to simulate the exams. Students will take practice tests, review answers, research incorrect answers, and obtain correct answers. The actual exam is scheduled when the student feels prepared for it.

**NUR 103\* PN Success** 3  
This course provides an orientation to the Practical Nursing program. The course includes math for medication administration, basic computer use, and strategies to learn and test well.

**NUR 106\* Foundations of Nursing KSPN** 4  
This course utilizes the nursing standards of practice based on principles of biology, psychosocial, spiritual and cultural to meet the needs of clients throughout the lifespan. Emphasis is placed on basic nursing skills, patient safety and therapeutic communication. Concepts and skills are enhanced in subsequent courses.

## CATALOG COURSE LISTING WITH PREREQUISITES

**NUR 117\* Pharmacology KSPN 4**  
This course introduces the principles of pharmacology and drug classifications. The course also covers the effects of selected medication on the human body. The nursing process is used as the framework for ensuring safe and effective nursing care for clients across the lifespan. *PreReq: NUR 103*

**NUR 122\* Medical Surgical Nursing I KSPN 4**  
This course focuses on the effect of disorders of selected systems throughout the lifespan and applies the nursing process in meeting basic needs. Health promotion and maintenance, rehabilitation, and continuity of care are emphasized. The role of the practical nurse is incorporated throughout. *PreReq: NUR 106, NUR 126*

**NUR 126\* Foundations of Nursing Clinical I KSPN 2**  
This clinical course explores the art and science of nursing. The course will focus on the nursing process, cultural and spiritual awareness, communication, data collection, performance of basic nursing skills, and documentation. The course will also introduce the principles of safe medication administration.

**NUR 127\* Medical-Surgical Nursing I Clinical KSPN 3**  
This course provides practical experience in simulated and actual care situations dealing with selected systems throughout the lifespan. The course will use acute and long-term care settings and will focus on critical thinking and clinical decision-making skills, principles of leadership for the practical nurse, and multi-task management skills for transition as a practical nurse. Note: Medication administration competency evaluations in NUR 126 must be passed in order to dispense and administer medications in this clinical experience. *PreReq: NUR 106, NUR 126*

**NUR 130\* IV Therapy for LPN 3**  
This course is designed to prepare the LPN to start, maintain, troubleshoot, and discontinue intravenous infusions safely and in accordance with Kansas statute and regulations. The course consists of online learning, 10 hours on-site clinical experience, and two hours on site for the final written exam. The course is also appropriate for RNs wanting to learn basic IV therapy or to refresh their skills. HCC Technical Center is approved as a provider of continuing nursing education by the Kansas State Board of Nursing. This course offering is approved for 32 contact hours applicable for LPN relicensure or 20 contact hours for RNs. Kansas State Board of Nursing Provider: available upon request.

**NUR 150\* Gerontology KSPN 2**  
This course explores issues related to the aging adult using the nursing process as the organizing framework. The course also examines the impact of ageism, alterations in physiological and psychosocial functioning, and the role of the practical nurse in caring for older adult clients.

**NUR 156\* Mental Health Nursing KSPN 2**  
This course explores basic concepts and trends in mental health nursing as well as therapeutic modalities and client behavior management. The course will emphasize the nursing process and meeting the basic human needs of the mental health client.

**NUR 157\* Maternal Child Nursing KSPN 2**  
This course focuses on pre-natal and post-natal maternal nursing care, as well as the care of children from infancy to adolescence. The course emphasizes normal reproduction and frequently occurring biological, cultural, spiritual, and psychosocial needs of the child-bearing and child-rearing family.

**NUR 159\* Medical-Surgical Nursing II KSPN 4**  
This course focuses on the effect of disorders of selected systems throughout the lifespan and applies the nursing process in meeting basic needs. Prevention, rehabilitation, and continuity of care are emphasized. The role of the practical nurse is incorporated throughout.

**NUR 162\* Critical Thinking in Nursing 2**  
This course focuses on developing a deeper understanding of the nursing process and critical thinking in the work environment. The course will present scenarios, case studies, practice tests, and ATI test performance.

**NUR 163\* Nursing Leadership & Management 2**  
This course focuses on the skills needed to set and meet goals within a nursing workplace setting, including management, delegation, evaluation, and time and resource management within the scope of practice of the LPN in Kansas. Legal and ethical standards are also presented as guides to behaviors of the nurse.

**NUR 168\* Maternal Child Nursing Clinical KSPN 1**  
This clinical course applies concepts from Maternal Child I. Emphasis is placed on the nursing process and meeting the basic needs of the maternal child client.

**NUR 170\* Medical-Surgical Nursing II Clinical KSPN 3**  
This experience uses simulated and actual care situations of selected systems throughout the lifespan, utilizing acute ADN long-term care settings. An emphasis is placed on critical thinking and clinical decision-making skill development. Principles of leadership for the practical nurse will be implemented, as well as multi-task management skills for transition as a practical nurse.

**NUR 172\* Clinical Simulations 1**  
This clinical course uses both moderate and high fidelity manikins in a variety of clinical situations designed to give students a safe environment to test clinical understanding and competence.

**NUR 201 Certified Nurse Aide 6**  
This course is based on the Kansas Department of Health and Environment (KDHE) Certified Nurse Aide Curriculum Guidelines (90 Hours) and prepares individuals to take the state certification exam. The course focuses on the responsibilities of the nurse aide working as a member of the health team in caring for residents of long term care facilities. The course includes basic anatomy and physiology, communication skills, measurement of vital signs, and procedures to help meet the hygiene, nutrition, and rehabilitation needs of older individuals. Students who successfully complete this course and pass the state exam will be qualified to become a practicing Kansas Certified Nurse Aide (CNA). *PreReq: Permission*



**NUR 202 Certified Medication Aide** 5  
This course is based on the Kansas Department of Health and Environment (KDHE) Medication Aide Curriculum and prepares individuals to take the state certification exam. The course focuses on the responsibilities associated with medication administration, including drug dosage calculations. Students who successfully complete this course and pass the state exam will be qualified to become a practicing Kansas Certified Medication Aide (CMA).  
*PreReq: Kansas Certified Nurse Aide*

**NUR 203 Certified Medication Aide Certification Update I** 1  
Provides continued certification for the Certified Medication Aide.  
*PreReq: Permission*

**NUR 206 Social Service Designee** 3  
This course prepares the individual for the role of Social Services Designee in an adult care facility. The course examines the impact of aging changes on the psychosocial and physical needs of long-term care residents. The course also covers the specific responsibilities and functions of the Social Services Designee with residents and as a member of the healthcare team. *PreReq: Permission*

**NUR 220\* LPN to RN Transition** 1  
This course prepares the licensed practical nurse to perform as a registered nurse by expanding the LPN knowledge base and exploring the scope of practice of the RN. The course begins with a review of nursing process, communication, client teaching, and critical thinking. Also covered are the philosophy of associate degree nursing as well as the philosophy and objectives of the LPN to RN completion program. The scope and the standards of practice for the professional RN are stressed. In addition, the results of entrance testing provide a blueprint for the LPN student to use for content review and remediation. *PreReq: Admission to LPN to RN*

**NUR 225\* Health Assessment & Advanced Nursing Skills** 4  
The course provides the framework for preparing students to perform comprehensive health assessments. Emphasis is placed on taking a thorough nursing history, performing physiological, psychological, sociological, cultural, and spiritual assessments. Laboratory experiences provide an opportunity to practice assessment and perform a head to toe assessment at a prescribed competency level. This course will also develop student skills in relation to advanced nursing skills needed to provide patient-centered care to patients with complex and multisystem disorders. *PreReq: Admission to LPN to RN*

**NUR 230\* Advanced Medical-Surgical Nursing** 6  
This course focuses on the care of adult and older patients with complex medical/surgical health alterations. Emphasis is placed on helping patients and their families cope with alterations in body functions. Concepts of pharmacology and parenteral therapy, health promotion and education, evidence-based practice, and inter-professional collaboration will be integrated throughout the course. Intermediate and complex clinical skills, as well as priority setting, clinical judgment, and tenets of legal and ethical practice are integrated throughout the course. Emphasis is placed on

enhancing time management, organizational, and priority-setting skills when providing care to patients with multiple needs. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe, quality care to patients. *PreReq: Admission to LPN to RN*

**NUR 235\* Advanced Mental Health Nursing** 3  
This course focuses on the care of patients across the lifespan experiencing cognitive, mental, and behavioral disorders. Emphasis is placed on management of patients facing emotional and psychological stressors as well as promoting and maintaining the mental health of individuals and families. Concepts of crisis interventions, therapeutic communication, anger management, and coping skills are integrated throughout the course. The community as a site for care and support services is addressed. Clinical experiences provide the student an opportunity to apply theoretical concepts and implement safe patient care to patients in selected mental health settings. *PreReq: Admission to LPN to RN*

**NUR 235\* Advanced Mental Health Nursing** 3  
This combined lecture/discussion and clinical course focuses on the client need for care and support in times of stress, crisis, and acute or chronic mental illness. The course will explore selected mental illnesses and their treatment modalities, care for clients with dependencies (substance and non-substance), care for clients in crisis and care for clients and families experiencing end of life. Critical thinking, nursing process, caring, therapeutic communication and documentation, and teaching/learning are integrated throughout the course.

**NUR 240\* Nurse as Manager of Care** 2  
This online course focuses on the principles of management used in professional nursing. The course covers client and staff safety as well as legal and ethical issues pertaining to management. Also covered are topics in delegation, client, time, and resource management, evaluation, patient teaching, and communication skills with a multidisciplinary health care team. This course addresses program outcomes 4, 5, and 6. *PreReq: NUR 220, NUR 225, NUR 230, NUR 235, NUR 245*

**NUR 245\* High Risk Maternal-Child Nursing** 2  
This lecture/discussion course provides content needed for the registered nurse to care for the high-risk maternal, newborn, and pediatric client not covered in the basic LPN curriculum. The nursing process, developmental age, communication, and pharmacology are integrated into this course. *PreReq: NUR 220, NUR 225, NUR 230, NUR 235*

**NUR 250\* Professional Nursing Practicum** 4  
This clinical course is the capstone course for the LPN to RN Completion program. Students will demonstrate novice competency as a professional nurse by managing and providing care for a culturally, economically, medically, developmentally, and socially diverse clientele in a variety of clinical settings. Students will develop and implement plans of care using critical thinking and the nursing process, employ therapeutic communication, support physiologic and psychosocial integrity, and promote a safe environment for clients. *PreReq: NUR 220, NUR 235, NUR 230, NUR 225, NUR 240, NUR 245*

## CATALOG COURSE LISTING WITH PREREQUISITES

- PE 103 Volleyball (WVA)** 1  
This course is for women participating in volleyball at the collegiate level. The course is designed to improve skill and knowledge in all areas of volleyball.
- PE 104 Basketball (WVA)** 1  
This course is for women participating in basketball at the collegiate level. The course is designed to improve skill and knowledge in all areas of basketball.
- PE 105 Football (MVA)** 1  
This course is for men participating in football at the collegiate level. The course is designed to improve skill and knowledge in all areas of football.
- PE 106 Basketball (MVA)** 1  
This course is for men participating in basketball at the collegiate level. The course is designed to improve skill and knowledge in all areas of basketball.
- PE 107 Dance Team I** 1  
This performance class is specifically for members of the Classy Lassies dance group, which represents the College at athletic events and school activities. Auditions are required for admission. The course emphasizes development of technical and choreographic skills for performance.
- PE 108 Dance Team II** 1  
This performance class is specifically for members of the Classy Lassies dance group, which represents the college at athletic events and school activities. Auditions are required for admission. The course emphasizes development of technical and choreographic skills for performance. *PreReq: PE 107*
- PE 109 PE for Elementary Teachers** 3  
This course for prospective elementary teachers examines the practice of organized play activity. The course includes a study of the meaning of play, values of supervised play, and selection of games and activities. The course will also cover writing objectives and making lesson plans, unit plans, and a yearly plan. Different styles of teaching and how to evaluate programs and students will also be covered.
- PE 110 Rules and Officiating I** 2  
This course covers how to officiate the sports of football and volleyball. The course will examine rules and the development of officiating philosophies as a basis for judgment and decision making.
- PE 111 History and Principals of PE** 3  
This course focuses on the historical development and foundation areas of physical education in America.
- PE 112 Personal and Community Health** 3  
This course provides an overview of the physical, mental, emotional, social, and spiritual components of health that affect the whole human being. The course will include an introduction to the interde-
- pendency and relationships between such topics as mental/emotional health, drug use, drug misuse, drug abuse, physical fitness, nutrition, consumer health, human sexuality, death and dying, community health, environmental health, and diseases.
- PE 113 First Aid and Safety** 3  
This course focuses on identifying and eliminating potentially hazardous conditions in various situations, recognizing emergencies, and making appropriate decisions for first aid care. The course covers the knowledge and skills that people in the workplace need to give immediate care to an ill or injured person until more advanced medical care arrives.
- PE 114 Track (WVA)** 1  
This course is for women participating in track and field at the collegiate level. The course is designed to improve skill and knowledge in all areas of track and field.
- PE 115 Softball (WVA)** 1  
This course is for women participating in softball at the collegiate level. The course is designed to improve skill and knowledge in all areas of softball.
- PE 116 Track (MVA)** 1  
This course is for men participating in track and field at the collegiate level. The course is designed to improve skill and knowledge in all areas of track and field.
- PE 117 Baseball (MVA)** 1  
This course is for men participating in baseball at the collegiate level. The course is designed to improve skill and knowledge in all areas of baseball.
- PE 118 Cross Country I (MVA)** 1  
This course is for men participating in cross country at the collegiate level. The course is designed to improve skill and knowledge in all areas of cross country.
- PE 119 Tennis** 1  
This course covers the basic skills, fundamentals, knowledge of the rules, and strategies of the game of tennis.
- PE 121 Volleyball I** 1  
This course is designed to provide instruction in the basic skills of volleyball, including the forearm pass, overhead set, spike, and overhand serve. Elementary offenses and defenses will also be covered in the course.
- PE 122 Archery** 1  
This course provides the basic skills, fundamentals, and general information about the leisure sport of archery. The course will introduce the skills, general rules, safety, and techniques related to the sport of archery, with emphasis on acquisition of skills.

*\*indicates a technical course*

**PE 123 Introduction to Physical Education** 3  
This course provides a study of the historical background, philosophy, and principles of the field of physical education. The course will also offer some practical experience in this area.

**PE 124 Weightlifting I** 1  
This course offers an individualized weightlifting program designed to improve physical health, well-being, and strength.

**PE 125 Introduction to Recreation** 3  
This course is designed for the student interested in a career in recreation. Various recreational activities are included in this class along with opportunities for practical experience. The student is also given the opportunity to work in a recreational setting in the community.

**PE 126 Physical Fitness Management** 1  
This course is designed to provide each student the opportunity to develop the knowledge and skills essential for maintaining a fitness lifestyle.

**PE 127 Cheerleading I** 1  
This performance course is for members of the College spirit group of cheerleaders, yell leaders, and mascots. The course emphasizes the development of physical and technical skills, including jumps, stunts, cheers, chants, conditioning, and safety for performing at athletic events and other school activities.

**PE 128 Cheerleading II** 1  
This performance course is for members of the College spirit group of cheerleaders, yell leaders, and mascots. The course emphasizes the development of physical and technical skills, including jumps, stunts, cheers, chants, conditioning, and safety for performing at athletic events and other school activities. *PreReq: PE 127*

**PE 129 Basketball I** 1  
This course is designed to develop skills fundamental to playing basketball. The course will focus on strategies that are necessary for team play.

**PE 134 Golf** 1  
This course will cover the history, rules, fundamental techniques, proper use of the clubs, and courtesies of the game of golf.

**PE 135 Running Awareness** 1  
This course covers the proper mechanics of running and training, exercise benefits, fitness programs, warm-ups, and cool downs. The course will also emphasize cardiovascular fitness.

**PE 136 Baseball Conditioning I** 1  
This course is designed to improve individual physical strength and endurance through a strength program and conditioning drills. Enrollment is limited to those enrolled in activities courses such as baseball and softball.

**PE 137 Basketball Conditioning I - Men** 1  
This course provides weight training and conditioning for the men's basketball program. Enrollment is limited to those enrolled in basketball activity courses.

**PE 138 Basketball Conditioning I - Women** 1  
This course provides weight training and conditioning for the women's basketball program. Enrollment is limited to those enrolled in basketball activity courses.

**PE 139 Lifetime Fitness** 2  
This course is designed to provide an individual exercise and fitness evaluation and program. The course will focus on how to develop and maintain a fitness lifestyle.

**PE 139A Lifetime Fitness** 3  
This course is designed to provide each student pursuing the field of personal fitness training with the knowledge to build an individual exercise program, including cardiovascular, strength, and flexibility, essential for maintaining a fitness lifestyle. The course will also cover nutrition, weight management, and body composition. This course is part of an Applied Science Degree program and offers preparation for the National Council of Strength and Fitness personal trainer exam. *PreReq: Permission*

**PE 140 Advanced Weightlifting and Conditioning** 1  
This course provides an individualized program to improve health, well-being, and strength through weightlifting, conditioning drills, and agility drills.

**PE 141 PE for Men** 1  
This course focuses on improving strength and overall fitness through exercise. The course will demonstrate how to apply exercises to improve fitness.

**PE 143 Introduction to Athletic Training I** 3  
This course provides an overview of the athletic training profession and the field of sports medicine. The course will cover the different aspects of an athletic trainer's job and provide an opportunities for practical experience and observation in this field.

**PE 147 Cross Country I (WVA)** 1  
This course is for women participating in cross country at the collegiate level. The course is designed to improve skill and knowledge in all areas of cross country.

**PE 149 Softball Conditioning I** 1  
This course is designed to improve athleticism, both mental and physical. The course will focus on techniques used in the following aspects of softball: hitting, pitching, fielding, and base running.

**PE 150 Personal Trainer Field Experience I** 1  
This course provides a beginning hands-on experience for students pursuing a personal fitness trainer degree. The course will provide instruction and experience in how to interact with people participating in a personal training program. The course will include application

## CATALOG COURSE LISTING WITH PREREQUISITES

of exercise theory to fitness machine workouts. This course is part of an Applied Science degree program and offers preparation for the National Council of Strength and Fitness personal trainer exam.

### **PE 150A Personal Trainer Field Experience II** 1

This second semester course provides additional hands-on experience for students pursuing a personal fitness trainer degree. This course focuses on a more comprehensive approach to wellness. Students will work with staff members of the Walters Wellness center and will follow a program provided by the trainer to help individuals obtain their fitness goals. Students may also work with various athletic groups or clubs with pre-written programs. This course is part of an Applied Science degree program and offers preparation for the National Council of Strength and Fitness personal trainer exam. *PreReq: PE 150*

### **PE 150B Personal Trainer Field Experience III** 1

This third semester course provides additional hands-on experience for students pursuing a personal fitness trainer degree. This course provides experience in writing and executing comprehensive wellness programs with the input of the trainer. This course is part of an Applied Science degree program and offers preparation for the National Council of Strength and Fitness personal trainer exam. *PreReq: PE 150A*

### **PE 150C Personal Trainer Field Experience IV** 1

This fourth semester course is designed to provide each student pursuing the field of personal fitness training more experience outside of the college wellness center and campus. The student will be able to job shadow or interact with area fitness facilities. This course is part of an Applied Science Degree program and offers preparation for the National Council of Strength and Fitness personal trainer exam. *PreReq: PE 150B*

### **PE 151 Clinical Experience Athletic Training I** 2

This course will provide students with an introduction to clinical experiences in the Highland Community College Athletic Training Education Program. There will be application of introductory skills through laboratory practice and clinical experiences in practical settings. *PreReq: Permission*

### **PE 151B Clinical Experience Athletic Training II** 2

This course will provide an intermediate level of clinical experiences in the Highland Community College Athletic Training Education Program. There will be application of intermediate skills through laboratory practice and clinical experiences in practical settings. *PreReq: PE 151*

### **PE 151C Clinical Experience Athletic Train III** 2

This course will provide an advanced level of clinical experiences in the Highland Community College Athletic Training Education Program. There will be application of advanced skill modules through laboratory practice and clinical experiences in practical settings. *PreReq: PE 151B*

### **PE 151D Clinical Experience Athletic Training IV** 2

This course will provide a professional level of clinical experiences in the Highland Community College Athletic Training Education Program. There will be application of professional skills through laboratory practice and clinical experiences in practical settings. *PreReq: PE 151C*

### **PE 203 Volleyball II (WVA)** 1

This course is for women participating in volleyball at the collegiate level. The course is designed to improve skill and knowledge in all areas of volleyball. *PreReq: PE 103*

### **PE 204 Basketball II (WVA)** 1

This course is for women participating in basketball at the collegiate level. The course is designed to improve skill and knowledge in all areas of basketball. *PreReq: PE 104*

### **PE 205 Football II (MVA)** 1

This course is for men participating in football at the collegiate level. The course is designed to improve skill and knowledge in all areas of football. *PreReq: PE 105*

### **PE 206 Basketball II (MVA)** 1

This course is for men participating in basketball at the collegiate level. The course is designed to improve skill and knowledge in all areas of basketball. *PreReq: PE 106*

### **PE 207 Dance Team III** 1

This performance class is specifically for members of the Classy Lassies dance group, which represents the College at athletic events and school activities. Auditions are required for admission. The course emphasizes development of technical and choreographic skills for performance. *PreReq: PE 108*

### **PE 208 Dance Team IV** 1

This performance class is specifically for members of the Classy Lassies dance group, which represents the College at athletic events and school activities. Auditions are required for admission. The course emphasizes development of technical and choreographic skills for performance. *PreReq: PE 207*

### **PE 210 Advanced Concepts of Personal Training** 5

Released by the National Council on Strength & Fitness (NCSF), this is an intensive cumulative core course designed to prepare students for the NCSF National Certified Personal Trainer Exam. The course covers all the areas required for the exam and will include lessons with textbook reviews, presentations, and study guide sessions, as well as lab activities for each lesson or chapter of the textbook. There will be three hours lecture and two hours lab per week. *PreReq: Permission*

### **PE 214 Track II (WVA)** 1

This course is for women participating in track and field at the collegiate level. The course is designed to improve skill and knowledge in all areas of track and field. *PreReq: PE 114*

<b>PE 215 Softball II (WVA)</b> 1	<b>PE 228 Cheerleading IV</b> 1
This course is for women participating in softball at the collegiate level. The course is designed to improve skill and knowledge in all areas of softball. <i>PreReq: PE 115</i>	This performance course is for members of the college spirit group of cheerleaders, yell leaders, and mascots. The course emphasizes the development of physical and technical skills, including jumps, stunts, cheers, chants, conditioning, and safety for performing at athletic events and other school activities. <i>PreReq: PE 227</i>
<b>PE 216 Track II (MVA)</b> 1	<b>PE 236 Baseball Conditioning II</b> 1
This course is for men participating in track and field at the collegiate level. The course is designed to improve skill and knowledge in all areas of track and field. <i>PreReq: PE 116</i>	The course will focus on techniques for improving hitting, pitching, fielding, and base running. The course is designed to make the student a better athlete both mentally and physically. <i>PreReq: PE 136</i>
<b>PE 218 Cross Country II (MVA)</b> 1	<b>PE 237 Advanced Basketball Conditioning- Men</b> 1
This course is for men participating in cross country at the collegiate level. The course is designed to improve skill and knowledge in all areas of cross country. <i>PreReq: PE 118</i>	This course covers preseason conditioning for men's varsity basketball. The course will focus on proper weight training techniques and running principles. <i>PreReq: PE 137</i>
<b>PE 220 Theory of Coaching Basketball</b> 2	<b>PE 238 Advanced Basketball Conditioning - Women</b> 1
This course covers all phases of the game of basketball and is designed to provide a foundation for those interested in coaching basketball. The course will include developing a coaching philosophy, motivational techniques, offensive and defensive strategies, and developing a basketball program.	This course covers preseason conditioning for women's varsity basketball. The course will focus on proper weight training techniques and running principles. <i>PreReq: PE 138</i>
<b>PE 222 Theory of Coaching Football</b> 2	<b>PE 240 Advanced Weightlifting &amp; Conditioning II</b> 1
This course covers the history of the sport of football, theories of coaching, and fundamental coaching techniques.	This course provides an individualized program to improve health, well-being, and strength through weightlifting, conditioning drills, and agility drills. <i>PreReq: PE 140</i>
<b>PE 223 Theory of Coaching Baseball</b> 2	<b>PE 241 Weightlifting II</b> 1
This course covers the basic fundamentals of coaching the sport of baseball. The course will focus specifically on pitching, catching, infield and outfield positions, and hitting. The course will also cover how to deal with individual players and the correction of common faults.	This course offers an individualized weightlifting program designed to improve physical health, well-being, and strength. <i>PreReq: PE 124</i>
<b>PE 224 Care and Prevention of Athletic Injuries</b> 3	<b>PE 243 Introduction to Athletic Training II</b> 3
This course provides a practical study of injury recognition, preventative measures, evaluation techniques, supportive taping methods, and basic modalities and rehabilitation used in the management of athletic injuries.	This course covers documentation of athletic injuries, principles of therapeutic modalities, and methods of therapeutic exercise. <i>PreReq: PE 143 and permission</i>
<b>PE 225 Theory of Coaching Volleyball</b> 2	<b>PE 245 Baseball II (MVA)</b> 1
This course is designed to provide an understanding of the game of volleyball from a coaching perspective. The course will cover developing a personal coaching philosophy, organization of practices, teaching fundamentals, game strategies, working with individual athletes, team dynamics, team and program management, and professional development. The course will consider all levels of volleyball competition.	The course will focus on techniques for improving hitting, pitching, fielding, and base running. The course is designed to make the student a better athlete both mentally and physically. <i>PreReq: PE 117</i>
<b>PE 227 Cheerleading III</b> 1	<b>PE 247 Cross Country II (WVA)</b> 1
This performance course is for members of the College spirit group of cheerleaders, yell leaders, and mascots. The course emphasizes the development of physical and technical skills, including jumps, stunts, cheers, chants, conditioning, and safety for performing at athletic events and other school activities. <i>PreReq: PE 128</i>	This course is for women participating in cross country at the collegiate level. The course is designed to improve skill and knowledge in all areas of cross country. <i>PreReq: PE 118</i>
	<b>PE 249 Softball Conditioning II</b> 1
	The course will focus on techniques for improving hitting, pitching, fielding, and base running. The course is designed to make the student a better athlete both mentally and physically. <i>PreReq: PE 149</i>
	<b>PE 250 Exercise Physiology</b> 3
	This course examines the fundamental physiological processes that operate during exercise. The course will emphasize integrating systems and organs into a functional whole. Laboratory work will provide experience in evaluating exercise stress by motion methods and equipment. <i>PreReq: BS 105</i>

## CATALOG COURSE LISTING WITH PREREQUISITES

- PHI 101 Introduction to Philosophy** 3  
This course provides a study of major philosophical ideas of the Western world from the time of Plato to the present. The course will present a broad overview of the history of philosophy and the thoughts of major philosophers. Emphasis will be placed on showing relationships between current societies and significant philosophical ideas.
- PHI 102 Introduction to Ethics** 3  
This course provides a survey of ethical theories as they apply to the quest for human happiness and “the good life.” The principles of moral reasoning and good reasoning will be considered and emphasis will be placed on the views of leading moral philosophers of the western tradition, such as Aristotle, Kant, Mill, Nietzsche, and others. The course will also focus on the applications of moral theory to practice.
- PHI 103 Logic and Critical Thinking** 3  
The study of critical thinking and logic allows the student to practice skills in clear and logical thinking, analysis of information, and effective argumentation. The student will formulate and deliver arguments in written and oral form, supported by evidence and valid underlying assumptions.
- PHI 105 Religions of the World** 3  
This course provides an objective and impartial survey of the major religious systems of the world, including Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam.
- PHO 104 Introduction to Digital Photography** 3  
This is a basic course that provides familiarization with digital cameras and their technical controls. The course covers the use of camera functions: lens, exposure, f-stops, shutter speeds, and digital formats. Adobe Lightroom will be used as an image editing tool as well as digital printing output. The course will emphasize technical and compositional skills along with the aesthetic importance of the image. Students must have access to a digital single lens reflex (SLR) camera or equivalent with the ability for manual control and RAW image capture.
- PHO 105 Introduction to Film Photography** 3  
This course provides an introduction to film photography using a 35 mm single lens reflex (SLR) camera. The course will cover the use of gelatin silver black and white materials and achieving technical control of film, paper, and chemistries in the development and print processes, including techniques for refining the print image and using previsualization and darkroom manipulations.  
*PreReq: PHO 104*
- PHO 107 History of Photography** 3  
This course provides an introduction to the history of still photography as an art medium. The course will cover developments of the photographic image from 1839 to the present. Emphasis will be placed on individual artists, artistic movements, and photography as a communication tool.

- PHO 108 Applied Photography I** 1  
This course is designed for the student with an interest in commercial photography. The student will have supervised assignments in a field relating to their professional interests. Such areas may include, but are not limited to, portraiture, fashion, industrial, or illustration photography. The class will meet one hour per week, with additional hours arranged as necessary. *PreReq: PHO 101*
- PHO 109 Studio Photography I** 1  
This course is designed for the student with an interest in fine arts photography. The course will provide an opportunity to explore the possibilities of self-expression with the photographic image. Students may elect to explore non-silver (alternative) photographic processes as well, including, but not limited to, palladium printing, salted paper prints, carbon, or kallitype prints. The course will meet one hour per week, with additional hours arranged as necessary. *PreReq: PHO 101*
- PHO 110 Photography Fundamentals** 2  
This is a beginning course covering the basics of digital cameras and their technical controls. Camera functions: lens, exposure, f-stops, shutter speeds and digital formats will be explored. Emphasis will be geared toward understanding the creative potential and use of digital imaging technology. Compositional skills and the aesthetic importance of image making will be discussed.
- PHO 203 Color Photography** 3  
This is an advanced course using digital technologies to examine, explore, and apply color theory in photographic works. The course will focus on the advanced use of Photoshop, color balancing, and management systems in digital printing. The emphasis of the course is on self-expression using color as a tool for mood and emotional value. Students must have access to a high quality digital SLR camera with the ability for manual control and RAW image capture. *PreReq: PHO 104*
- PHO 205 Lighting Techniques** 3  
This course provides an introduction to the physical laws of light and photographic lighting techniques. The course will cover terminology and lighting techniques for form, texture, and separation, using both portraiture and still life. Assignments will include controls and exposure of lighting systems such as working with natural, tungsten or strobe lighting. Students must have access to a high quality digital (single lens reflex) camera with the ability for manual control and RAW image capture. *PreReq: PHO 104*
- PHO 207 Advanced Digital Photography** 3  
This course is designed in exploring and using advance functions on the digital (single lens reflex) camera. Functions and topics include: color corrections, working in HDR, using live view, perspective controls, tweaking saturation, lens control and programing presets. Computer editing will include using both Adobe Lightroom and Photoshop. Assignments will be given in architecture, product and advertising, and fine art photography. Studio lighting techniques with tungsten, flood, or strobe systems will be utilized. *PreReq: PHO 203, PHO 205*

**PHO 208 Applied Photography II** 1  
This is an advanced course designed for the student with professional goals in commercial photography. The student will continue to concentrate on a series of photographs that will relate to their professional interests in a specific field. The class will meet one hour per week, with additional hours arranged as necessary. *PreReq: PHO 108*

**PHO 209 Studio Photography II** 1  
This advanced course is designed for the student with professional goals in the photographic fine arts. Students will continue to explore the photographic image as a tool for self-expression. Students may elect to work with traditional or non-traditional processes. The course will meet one hour per week, with additional hours arranged as necessary.

**PHO 210 Landscape Photography** 3  
This course allows students to work in the natural environments of the landscape. The goal of the course is to expand technical and aesthetic photographic skills by working in practical and unique field locations. Daily field sessions and lectures will be scheduled as well as individual assistance. The student will select a field project of their choice. Topics could include, but are not limited to, fine art landscape, wildlife, macro, and portrait location photography. *PreReq: PHO 101*

**PHO 210A Landscape Photography** 3  
This course allows students to work in the natural environments of the landscape. The goal of the course is to expand technical and aesthetic photographic skills by working in practical and unique field locations. Daily field sessions and lectures will be scheduled as well as individual assistance. The student will select a field project of their choice. Topics could include, but are not limited to, fine art landscape, wildlife, macro, and portrait location photography. *PreReq: PHO 101*

**PHO 260 Portfolio Preparation** 1  
Provides individuals with the necessary skills and knowledge to design and prepare a portfolio. A finished portfolio can be helpful in seeking educational goals such as scholarships or entrance requirements, or utilized in seeking employment. *PreReq: Permission*

**POL 100 United States Government** 3  
This course focuses on the political arena and public affairs of the national government of the United States. The course will examine the development of constitutional principles and issues, such as civil liberties, the role of political parties, and the structure and function of the legislative, executive, and judicial branches of the United States government.

**POL 101 Introduction to Political Science** 3  
This course provides a survey of the field of political science. The course will cover the nature of politics and political power, the institutions of government and how they make decisions, enforce rules, and decide conflicts about policies, the nature of public opinion and political participation, major political ideologies and philosophers

of politics, and politics in the international realm. The course will focus on American politics but will also provide some comparison with other nations.

**POL 115 State and Local Government** 3  
This course examines the interrelationships between the federal, state, and local branches of the United States government. Current events will be discussed as they relate to state and local governmental entities. The course will also emphasize the impact of government on daily life.

**PS 101 College Physical Science** 5  
This course provides a study of major concepts in modern science. The course will focus on physics, chemistry, geology, meteorology, and astronomy. Some consideration will be given to the problems of energy and the environment. This course is designed for those with no previous background in physical science and will include laboratory experience. *PreReq: MAT 100*

**PS 102 Concepts of Physics** 4  
This course provides a qualitative introduction to the science of physics and examines principles from classic, relativity, and quantum theories. The course will cover motion, forces, energy, thermodynamics, waves, electromagnetism, atomic physics, special and general relativity. This course is intended as a broad-based introduction to physics for students who are not majoring in science. Three hours of lecture and 1.5 hours of lab per week. *PreReq: MAT100 or assessment*

**PS 104 Physical Geology** 4  
The course offers an introduction to the basic principles of geology. The course covers geological measuring techniques, minerals and rocks, internal processes such as plate tectonics, earthquakes and volcano, and surface processes such as streams, coasts, mass movement, and glaciers. This course is intended as a broad-based introduction to geology for students who are not majoring in science. Three hours of lecture and 1.5 hours of lab per week.

**PS 107 General Chemistry** 5  
This course includes a survey of chemistry with special emphasis on solutions and biochemistry. This course is for students who have not had the equivalent of one year of high school chemistry. The course is designed for students majoring in scientific and technological fields such as allied health and agriculture. Three hours of lecture and three hours of lab.

**PS 108 Astronomy** 4  
This course provides a qualitative introduction to the nature of the solar system and beyond. The course will cover the celestial sphere, astronomical observation techniques, the planets and moons, asteroids and comets, the Sun, the lives and evolution of stars, pulsars, black holes, galaxies and dark matter. This course is intended as a broad-based introduction to astronomy for students who are not majoring in science. Three hours of lecture and 1.5 hours of lab per week. *PreReq: MAT 100 or assessment*

# CATALOG COURSE LISTING WITH PREREQUISITES

## PS 111 College Chemistry I 5

This course provides a college-level introduction to chemistry. The course is intended for those students majoring in technological and scientific fields such as engineering, pre-medical, pre-veterinary, pre-pharmacy, pre-dentistry. This is also the PreRequisite course for further chemistry studies in organic chemistry, biochemistry. The course will focus on the study of chemical compounds, their properties and reactions, and the scientific laws which determine their behavior. Topics include basic chemical concepts, calculations with chemical formulas and equations, chemical reactions, thermochemistry, modern theories of the atom and electronic structure, chemical periodicity, and chemical bonds. This is the first semester of a two-semester sequence. *PreReq: High school chemistry, MAT 103, or permission*

## PS 112 College Chemistry II 5

This course is a continuation of PS 111 and is designed for students whose studies will continue in science or engineering. This is also a part of the required pre-professional course load. Topics include crystals and solids, reaction kinetics, chemical equilibrium, solution chemistry including acid-base and complex-ion equilibria, thermodynamics, and electrochemistry. There is also a brief discussion of organic chemistry, biochemistry, and nuclear chemistry. *PreReq: PS 111*

## PS 203 General Physics I 5

This course provides a study of units, physical quantities and vectors, motion, forces and equilibrium, oscillations and waves, gravitation, work, energy, and thermodynamics. This is the introductory course for those who require algebra-based physics. *PreReq: MAT 104*

## PS 204 General Physics II 5

This course includes the study of electricity, magnetism, electromagnetic induction, electromagnetic waves, optics, and atomic and nuclear physics. This is a second semester course for students who require algebra-based physics. *PreReq: PS 203*

## PS 210 Organic Chemistry I 5

This course is the first of a two-semester sequence. Fundamental topics studied will include hybridization, bond and molecular orbitals, stereochemistry, acids and bases, chemical radicals, kinetics, thermodynamics, conformational analysis, and molecular structure. These topics will be applied to alkanes, haloalkanes, alkenes, and alcohols. Spectroscopic techniques including NMR, IR, and mass spec will be applied to structure determination of organic molecules. *PreReq: PS 111, PS 112, and permission*

## PS 212 Organic Chemistry II 5

This course is the second of a two-semester sequence. Fundamental topics studied will include a continuation of all topics from the first semester and their application to chemical synthesis and structure determination. These topics will be applied to aldehydes and ketones, carboxylic acids and their derivatives, amines, aromaticity, benzene and its derivatives, organometallic compounds, conjugated and unconjugated unsaturated systems, and pericyclic reactions. Selected applications to biochemistry, medicinal and

pharmaceutical chemistry, and industrial chemistry will also be discussed. *PreReq: PS 210 and permission*

## PS 215 College Physics I 5

This course covers in detail the analysis of units, physical quantities and vectors, motion, forces and equilibrium, oscillations and waves, gravitation, work, energy, and thermodynamics. This is a first semester course for students who require calculus-based physics such as engineering, chemistry, physics, and pre-med majors. Three hours of lecture, one hour of recitation and two hours of lab per week. *PreReq: MAT 110 may be taken concurrently*

## PS 216 College Physics II 5

This course continues PS 215 and includes the study of electricity, magnetism, electromagnetic induction, electromagnetic waves, optics, and atomic and nuclear physics. This is a second semester course for students who require calculus-based physics such as engineering, chemistry, physics, and pre-med majors. Three hours of lecture and one hour of recitation and two hours of lab per week. *PreReq: PS 215*

## PSY 101 General Psychology 3

This general survey course provides a broad background in the principles and applications of scientific psychology. The course will focus on the principles and proponents of psychological theories and methods of scientific inquiry, as well as the biological basis of behavior, including physiology of the brain and nervous system and the accompanying sensory systems and perceptual processes. The course also covers learning theories and cognitive processes, theories and applications of motivation and emotion, the major phases of human life span development, and the major theories of personality, including disorders, treatments, therapies, and how human interaction is influenced by the individual, group, and environment.

## PSY 202 Child Psychology 3

This course is a study of child development from conception to adolescence. The course will cover the physical, intellectual, emotional, and social aspects of personality. Genetic predisposition and environmental influences will also be reviewed. *PreReq: PSY 101*

## PSY 205 Human Growth and Development 3

This course focuses on human development using normative scales for physical, intellectual, emotional, language, social, and personality development. The process of human growth and development across biological beginnings, infancy, childhood, adolescence, adulthood, and end of life will be presented. Environmental and biological influences that affect development are also reviewed.

## PSY 206 Social Psychology 3

This course provides a psychological perspective on social behavior and the processes involved in being a member of a social group. Social psychology is the scientific study of how people think about, influence, and relate to one another. Topics include self-concept, perception, attitude, social influence, conformity, persuasion, prejudice, group influence, and pro-social behavior. The individual as a member of a group and society is a central component of this course. *PreReq: PSY 101*



**PSY 280 Health Psychology** 3  
This course examines the psychosocial factors relevant to general health. The course will cover the contributions of psychological theory to the encouragement of health and wellness and prevention of physical illness. Course topics include stress management, theories of pain and pain management, and evaluation of health related research. *PreReq: PSY 101*

**PSY 290 Abnormal Psychology** 3  
This course is a study of emotional and behavioral disorders. Abnormal Psychology focuses on the description, causes, and treatment of abnormal behavior patterns. Classifications of disorders according to the DSM-IV, such as mood disorders, anxiety disorders, psychotic disorders, and personality disorders will be presented. Methods of treatment, specifically psychotherapies and biomedical therapies, will be discussed. *PreReq: PSY 101*

**RM 100 Security & Loss Prevention** 3  
This course is designed to provide a comprehensive overview of security and loss prevention. The course will focus on loss problems and those countermeasures that protect against crimes, fires, and accidents.

**RM 110 Risk Assessment** 3  
This course is designed to provide a comprehensive overview of the risk management process. The course will focus on loss exposures that organizations face and will cover the quantitative foundations needed for assessing the importance of loss exposures and forecasting their effect.

**RM 111 Investigations in the Workplace** 3  
This course is designed to provide a comprehensive overview of the investigative process. The course explores the methodology, rationale, and practices involved in effective workplace investigations.

**RM 112 Security & Loss Prevention II** 3  
This course examines security and loss prevention challenges associated with specific areas and industries. The course will focus on loss problems and those countermeasures that protect against crimes, fires, and accidents. *PreReq: RM 110*

**RM 114 Risk Control** 3  
The course is designed to provide a comprehensive overview of the risk control process, including the techniques and measures available to control the risks from property, personnel, liability, and net income loss exposures. *PreReq: RM 110*

**RM 115 Prevention and Assessment Workplace Violence** 3  
This course is designed to provide a comprehensive overview of the prevention, assessment, and intervention of workplace violence.

**RM 116 Safety I** 3  
This course is designed to provide a comprehensive overview of the safety responsibilities associated with a risk management professional. The course will focus on general industry: officers, retailers, manufacturers, and industrial facilities that do not have special technical safety concerns.

**RM 117 Foundations of Information Systems Security and Loss Prevention** 3  
This course is designed to provide a comprehensive overview of information systems security. The course will focus on establishing and managing an information system protection program.

**RM 200 Risk Finance** 3  
The course is designed to provide a comprehensive overview of the risk financing process, including the techniques and measures available to finance the risks from property, personnel, liability, and net income loss exposures. *PreReq: RM 114*

**RM 201 Safety II** 3  
This advanced course is designed to provide a comprehensive overview of the safety responsibilities associated with a risk management professional. The course will focus on general industry: officers, retailers, manufacturers, and industrial facilities that do not have special technical safety concerns.

**RM 202 Risk Communications** 3  
This course is designed to provide a comprehensive overview of the risk communication process. The course will cover care, consensus, and crisis communication as it relates to environmental, safety, and health issues.

**RM 204 Risk Quality** 3  
This course is designed to introduce the risk management professional to quality management concepts and tools. The course will cover continuous improvement tools, satisfying internal customers, meeting and team development and management, problem solving, survey development, cost/benefit analysis, and audit techniques.

**SOC 100 Creating Positive Settings for Children & Families** 1  
This course will consider how children's mental health is affected by life events, culture, environment, biology and relationships and how these aspects affect understanding and wellness. The course will include how to create safe and nurturing learning environments and strategies for working with families to create a healthy atmosphere for children. This course is instructor-led and interactive through discussions and assignments in course discussion boards.

**SOC 101 General Sociology** 3  
This course provides an introduction to sociology and the basic principles of sociological perspectives, theories, and research methods. The course will focus on the way culture patterns societies and social interaction and how these patterns are transmitted through socialization and social interaction. The course will also cover social stratification systems, social institutions, collective behaviors, social change, and perspectives on how social forces influence human activity and how human activity creates social forces.

**SOC 102 Marriage and the Family** 3  
This course examines the nature, development, functions, and norms of the family in American society as well as in other cultures. The course will focus on courtship, marriage, sexual relations, birth control, male and female roles, kinship, child rearing, divorce, and death in the family.

## CATALOG COURSE LISTING WITH PREREQUISITES

- SOC 104 Introduction to Social Work** 3  
This course provides an introduction to the field of social work. The course will cover the history, mission, values, and activities of social work practice. The course will focus on how social workers interact with a diverse client population and contribute to solving social problems. The knowledge and value base of the profession will also be examined.
- SOC 150 Community Leadership** 3  
This course will focus on leadership skills and community leadership procedures and techniques. The course will emphasize the principles of project management, including design, planning, follow-up, and closure, as well as problem solving, community diversity, and long-range planning.
- SOC 150A Community Leadership** 1  
This course will focus on leadership skills and community leadership procedures and techniques. The course will emphasize the principles of project management, including design, planning, follow-up, and closure, as well as problem solving, community diversity, and long-range planning.
- SOC 200 Sociology through Film** 3  
This course is designed to teach key sociological concepts and topics through the use of cinematic film. The course will examine how social life is presented, distorted, magnified, or politicized in the films. The course will also consider how films not only reflect society but also actually shape social trends and values. *PreReq: SOC 101 and ENG 101 with grade B or higher in both courses, SOC 102 or ANT 112*
- SOC 204 Introduction to Nonviolence Studies** 3  
This course will examine the theory and practice of nonviolence as a method of social change and as a way of life. The course will consider the dynamics of violence and nonviolence within individuals and in terms of global issues that affect the future of the Earth and its life forms. The course will focus on the history of nonviolence movements around the world and on people who have thought about and practiced nonviolence in their lives and work.
- SOC 210 Social Problems** 3  
This course examines a wide variety of social problems in society, including crime, racial discrimination, poverty, drug abuse, disorganization of social institutions, and rapid social change. The course will apply sociological theories to explain social problems and will look at various approaches used to solve these problems. *PreReq: SOC 101*
- SP 101 Oral Communications** 3  
The purpose of this course is to develop the understanding and skill necessary for meaning-oriented oral communication. This course focuses on becoming a more effective critical listener and communicator and includes both interpersonal and public communication.
- SP 105 Interpersonal Communication** 3  
This course is designed to improve student effectiveness in small-group and one-to-one communication.
- SP 106 Public Speaking** 3  
The purpose of this course is to increase student understanding of the principles and applications of public speaking through analysis and practice in communication theory, topic selection, audience analysis, research, use of support materials, content organization, presentation, and evaluation.
- TH 103 Theatre Practicum I** 1  
This course is designed to provide practical experience as a member of a theatre production crew. Crew members may work in several technical or production areas, including stage management, costumes, set design and construction, lighting, sound, properties, house management, and publicity.
- TH 104 Theatre Practicum II** 1  
This course continues TH 103 and is designed to provide additional practical experience as a member of a theatre production crew. Crew members may work in several technical or production areas, including stage management, costumes, set design and construction, lighting, sound, properties, house management, and publicity. *PreReq: TH 103*
- TH 105 Introduction to Dramatics** 3  
This course will provide a thorough survey of the basic elements of theatre and the dramatic arts.
- TH 106 Play Production** 3  
This course provides an introduction to the elements of play production. The course will cover planning, management, and technical aspects of play production and will include practical experience working with College productions.
- TH 108 History and Appreciation of Theatre Art** 3  
This course is designed to provide an introduction to the development of theatrical presentation from antiquity to the modern stage. The course will examine direction, management, design, and performance. Representative dramatic productions will be viewed to provide insight into the historical development and artistic values of theatre.
- TH 109 Fundamental Style and Principles of Acting** 3  
This course provides an introduction to the basics of acting and is geared towards students with little or no performance experience. The course will focus on rehearsal procedures and techniques, terminology, actor discipline, and public performance.
- TH 110 Acting I** 3  
This course continues TH 109 and provides additional experience in the basics of acting. The course is geared towards students with limited performance experience. The course will focus on rehearsal procedures and techniques, terminology, actor discipline, and public performance. *PreReq: TH 109*

**TH 151 Introduction to Stage Lighting** 3  
This course provides hands-on experience with the tools and theory of stage lighting and basic electricity, including types of lighting instruments, lamps, and plugs, types of lighting control equipment, special lighting effects, mounting productions, use of cue sheets, hanging plots, running orders, and dimmer schedules.

**TH 152 Stagecraft I** 3  
This course provides an introduction to the basic tools and principles of stagecraft. The course will focus on basic tools and their uses, shop organization and maintenance, construction, rigging, and painting. Course participants will be responsible for building, maintaining, and striking sets used in performances.

**TH 203 Theatre Practicum III** 1  
This course continues TH 104 and is designed to provide additional practical experience as a member of a theatre production crew. Crew members may work in several technical or production areas, including stage management, costumes, set design and construction, lighting, sound, properties, house management, and publicity. *PreReq: TH 104*

**TH 204 Theatre Practicum IV** 1  
This course continues TH 203 and is designed to provide additional practical experience as a member of a theatre production crew. Crew members may work in several technical or production areas, including stage management, costumes, set design and construction, lighting, sound, properties, house management, and publicity. *PreReq: TH 203*

**TH 206 Acting II** 3  
This course continues TH 110 and provides additional experience in the basics of acting. The course is geared toward students with some performance experience. The course will focus on rehearsal procedures and techniques, terminology, actor discipline, and public performance. *PreReq: TH 110*

**TH 207 Acting III** 3  
This course continues TH 206 and provides additional experience in acting. The course is geared toward students with some performance experience. The course will focus on rehearsal procedures and techniques, terminology, actor discipline, and public performance. *PreReq: TH 206*

**TH 211 Stagecraft II** 3  
This course continues TH 152 and provides additional experience in the use of basic tools and principles of stagecraft. The course will focus on basic tools and their uses, shop organization and maintenance, construction, rigging, and painting. Course participants will be responsible for building, maintaining, and striking sets used in performances. *PreReq: TH 152*

**VIN 111 Intro to Viticulture and Vineyard Establishment** 3  
This course is designed to introduce students to current practices for establishing a commercial vineyard and maintaining its health and productivity. Topics include varietal selection, site selection,

site preparation, equipment, first season establishment, vine growth development and training, trellis systems, vine propagation, weed control, and vine disease control. Field practicum sessions consisting of 16 hours of hands-on experience will be scheduled in area vineyards.

**VIN 211 Integrated Pest Management** 2  
This course focuses on how effective grape production depends on the grower developing a system of grape management that is appropriate for each vineyard. The course will also examine the decisions that need to be made for managing all the normal cultural practices, such as planting, fertility, harvesting, and pruning, as well as managing the insect, disease, and weed problems that occur either regularly or sporadically. The information in this course will address management issues related to common, expected pest problems as well as the occasional appearance of minor pest problems.

**VIN 212 Winter Viticulture Technology** 2  
This course is a study of commercial grape growing in the Midwest United States. Topics include cultivators, vine nutrition, irrigation, canopy management, pests, maturity sampling and harvest, balanced pruning/cropping, and cold injury. *PreReq: VIN 111 or permission*

**VIN 213 Midwest Vineyard Management** 2  
This course is a study of commercial grape growing in the Midwest United States. Topics include cultivators, vine nutrition, irrigation, canopy management, pests, maturity sampling and harvest, balanced pruning/cropping, and cold injury.

**VIN 214 Spring Viticulture Technology** 2  
This course is designed to provide practical experience in spring viticultural operations for students already initiated in the field of viticulture. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course, which will serve as work experience for those seeking employment in commercial viticulture. A minimum of 30 hours of field practicum are required along with a daily journal of practicum experiences. *PreReq: VIN 111 or permission*

**VIN 215 Summer-Fall Viticulture Technology** 2  
This course is designed to provide practical experience in summer/fall vineyard operations for students already initiated in the field of viticulture. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course, which will serve as work experience for those seeking employment in commercial viticulture. A minimum of 30 hours of field practicum are required along with a daily journal of practicum experiences. *PreReq: VIN 111 or permission*

**VIN 293 Soils for Viticulture** 3  
This course will explore soil properties and behavior and their influence on wines. The course focuses not only on growth and production, but also on the long-term effects of viticulture on soil quality and the wider environment.